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Variability of Major Organic  
Components in Aircraft Fuels  
Volume II: ILLUSTRATIONS (Volume II of III)

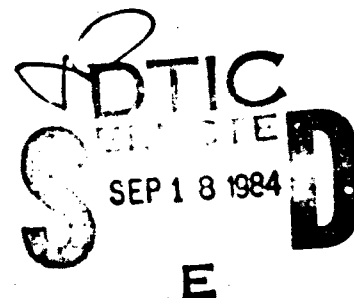
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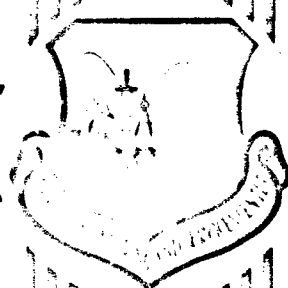
INTERIM REPORT  
DECEMBER 1982 - NOVEMBER 1983

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19. ABSTRACT (Continue on reverse if necessary and identify by block number) This report summarizes qualitative and quantitative data on the chemical variability of approximately 300 features (chemical components or mixtures of components) with concentrations greater than 0.1 mg/ml in Air Force distillate fuels obtained from over 50 sources. These data were obtained to better understand the environmental effects of possible fuel spills and to serve as a data baseline in photochemical smog and soot formation studies. Fifty-four petroleum-derived JP-4 fuels, one shale-derived JP-4 fuel, and one petroleum-derived JP-5 fuel were analyzed. The variability of the absolute concentrations in mg/ml was assessed for each feature in the capillary GC/FID(gas chromatography/flame ionization detection) analysis of the 54 fuels. Data base management programs developed and used in this assessment included the calculation of averages, ranges, standard deviations, and percent relative standard deviations of the 300 chromatographic feature concentrations in duplicate analyses of almost all of the fuels. The variability of the data acquisition and data analysis phases of the study was also assessed by calculating the					
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averages, ranges, standard deviations, and percent relative standard deviations for the 300 feature concentrations of one JP-4 fuel, which was used as the Reference Fuel and analyzed 14 times.

This report is presented in three volumes. Volume I contains the technical discussion, Volume II consists of illustrations, and Volume III contains the sample data package for JP-4 reference fuel.



## PREFACE

This research was conducted by Monsanto Company, Dayton Laboratory, 1515 Nicholas Road, Dayton, Ohio 45407 under contract No. F08635-83-C-0067, and JON 19002027 for the Headquarters Air Force Engineering and Services Center, Engineering and Services Laboratory, Environics Division, Tyndall AFB, Florida 32403. Thomas B. Stauffer was the AFESC/RDVC Project Officer.

The work was begun in December 1982 and completed in November 1983. This Interim report covers the analysis of 54 different JP-4 fuel samples, one JP-5 sample and one shale-derived JP-4 sample.

This report is presented in three volumes. Volume I contains the technical discussion, Volume II consists of illustrations and Volume III contains the sample data package for JP-4 reference fuel.

This report has been reviewed by the Public Affairs Office and is releasable to the National Technical Information Service (NTIS). At NTIS it will be available to the general public, including foreign nations.

This report has been reviewed and is approved for publication.

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## FIGURES

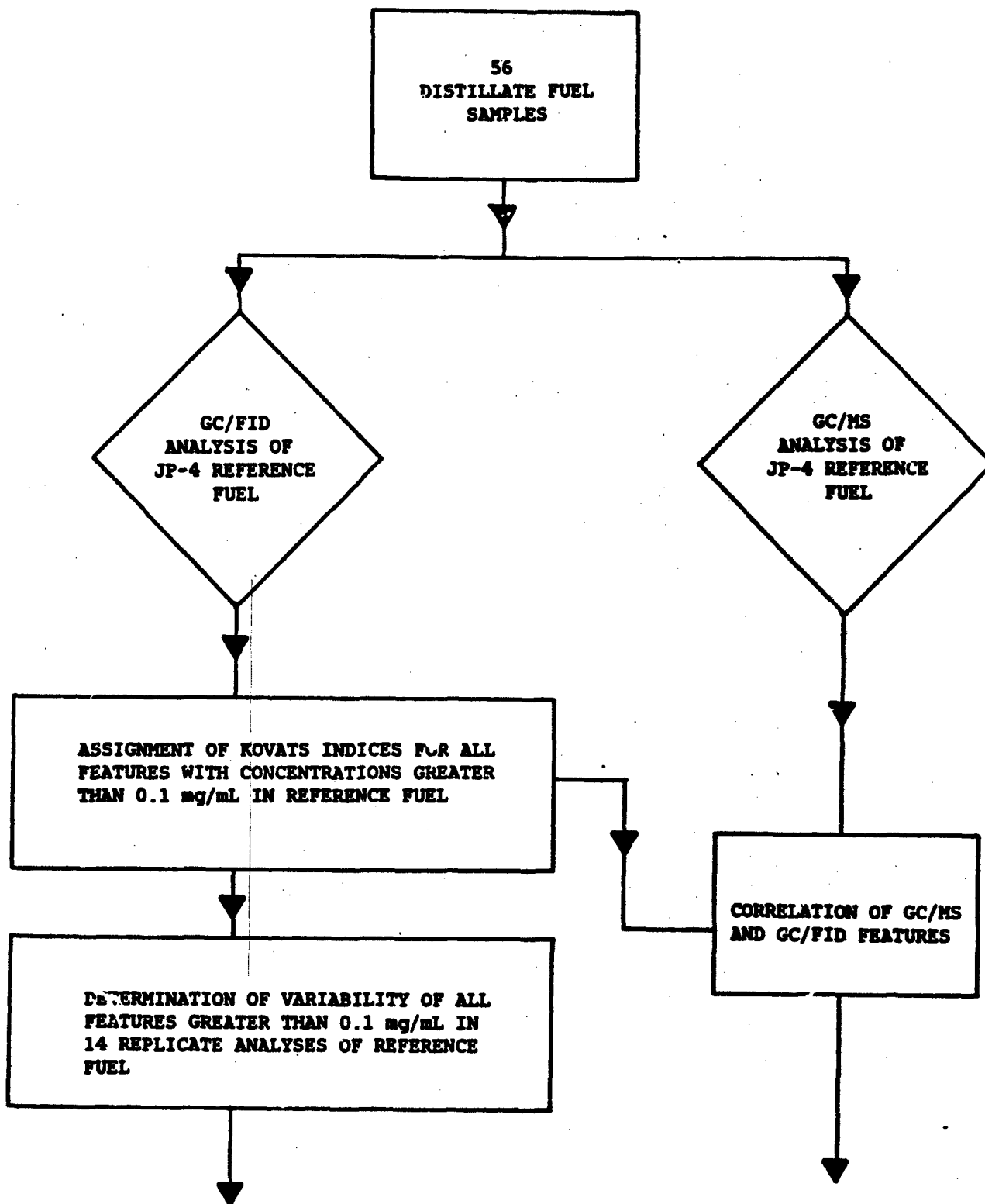


Figure 1. Summary of GC/FID and GC/MS Analyses Used to Obtain Feature Distributions in Distillate Fuels.



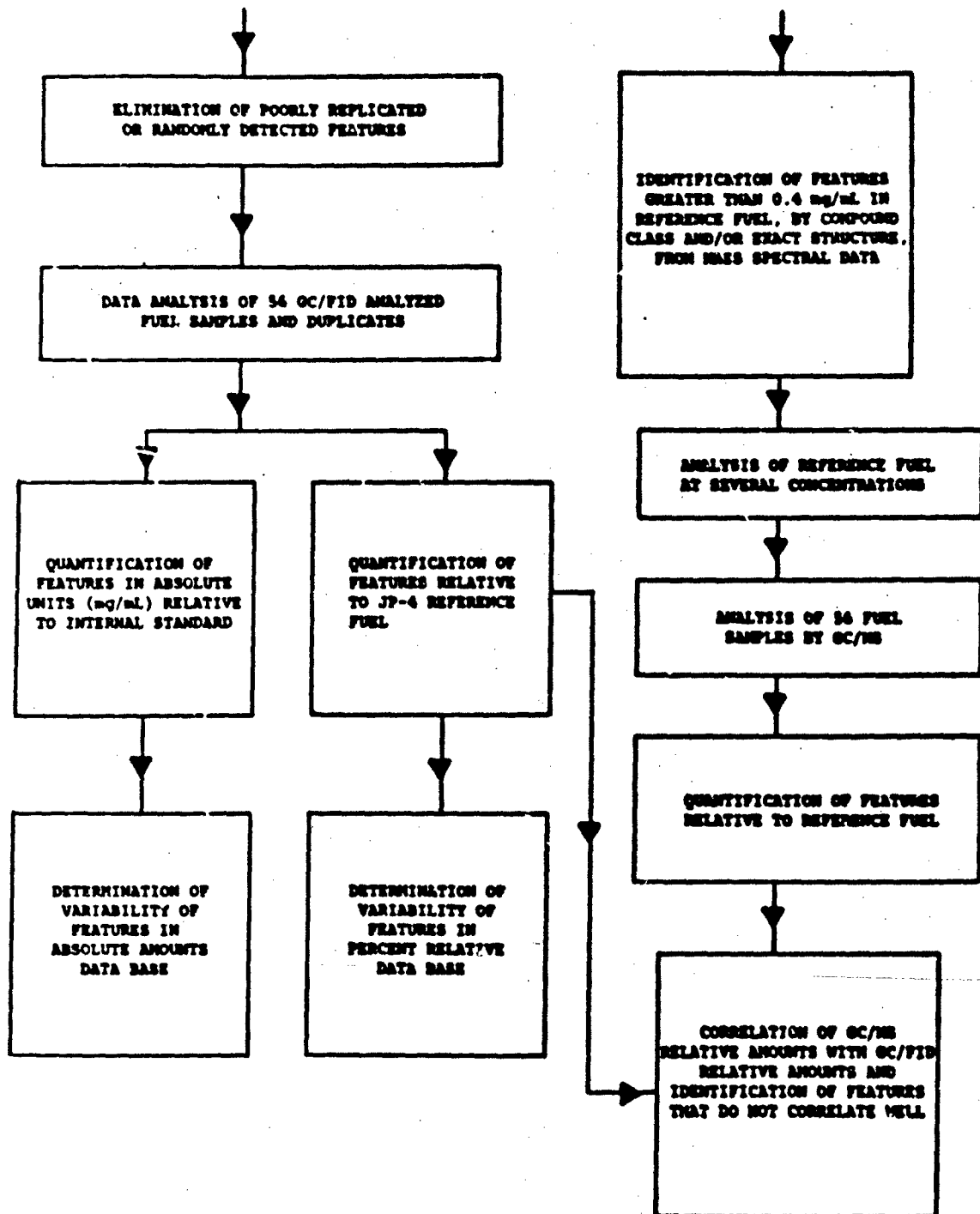


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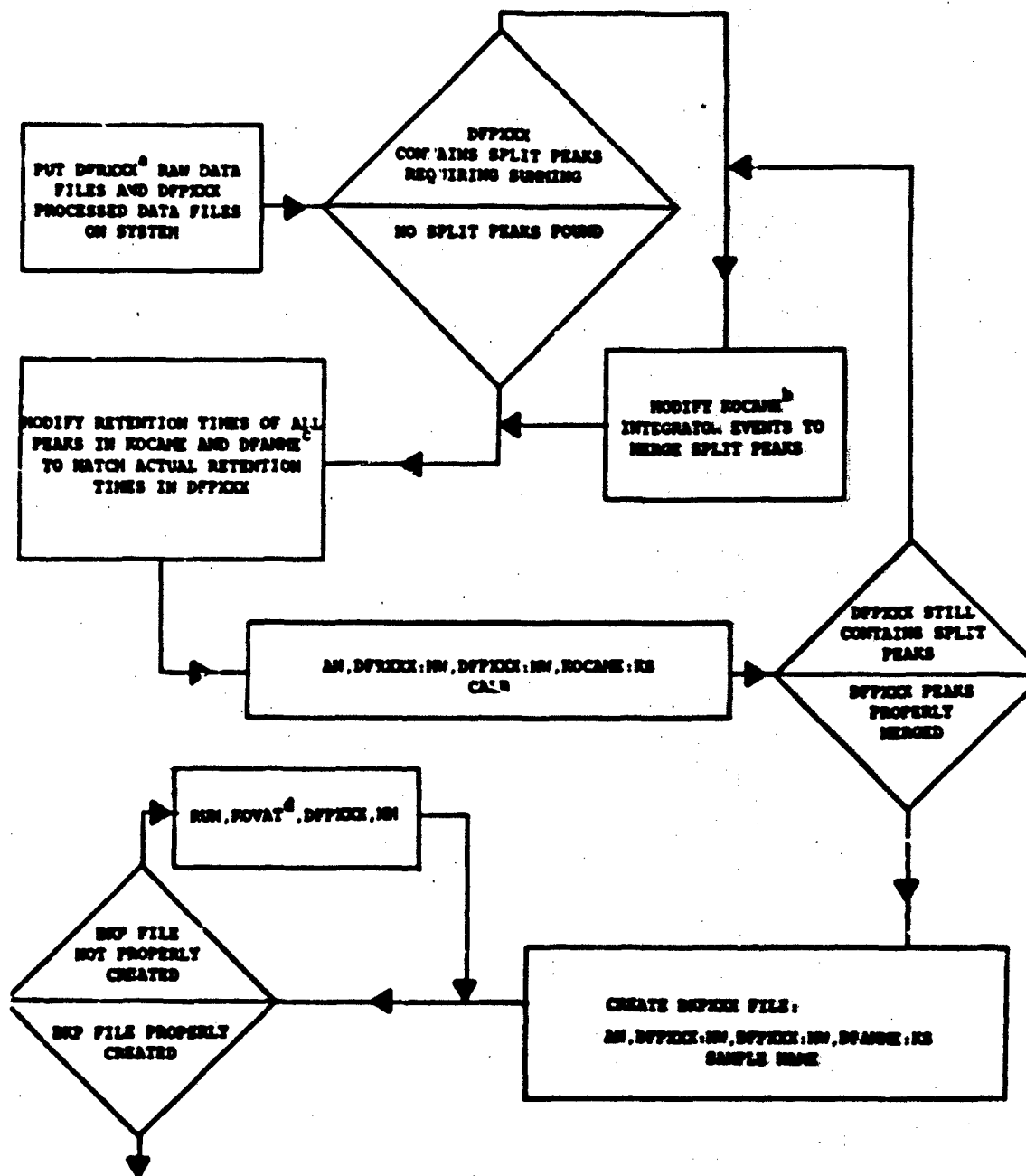


Figure 2. Flow diagram for Distillate Fuel Feature Selection.

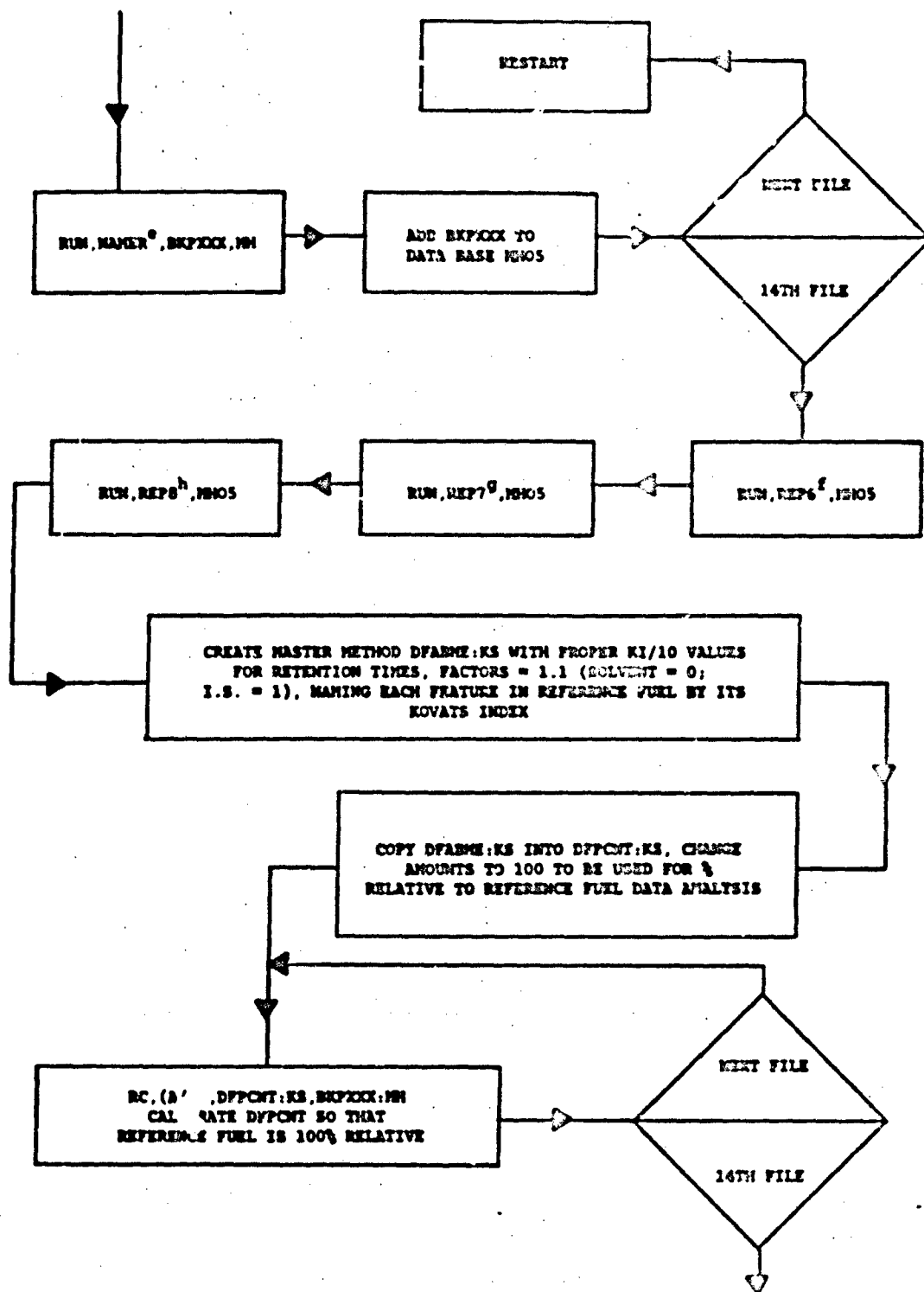
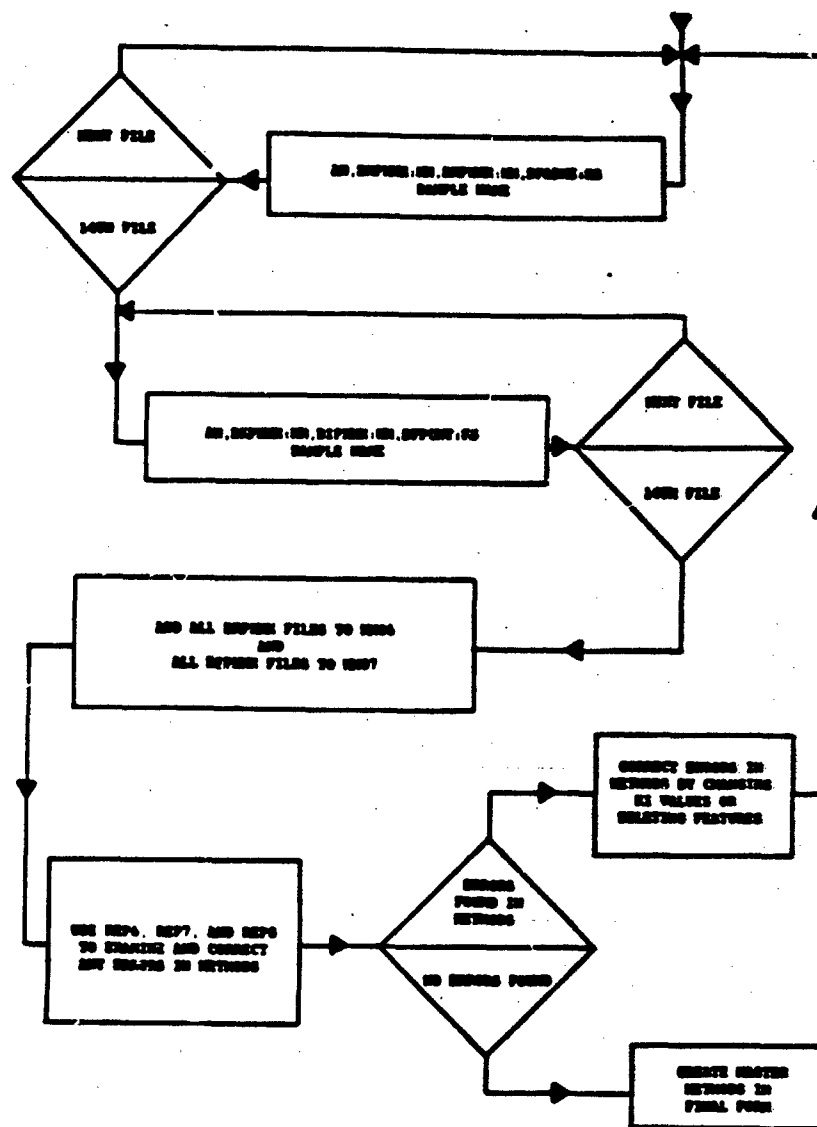


Figure 2 (continued)



\* - Each file must be processed to this point before beginning analysis of next file.

<sup>1</sup>REX represents a unique three-digit number associated with all files generated from a particular sample injection.

<sup>2</sup>REAN is a method that contains the normal hydrocarbon or calibration peaks as well as the three impurities and internal standard peaks. This method is used only for calibration purposes because the factors are modified during this process. Post analysis programs are REAN1 and REAN2.

<sup>3</sup>This file is the same as REAN, except that the factor for the solvent is zero. All other features, including the internal standard, have a factor of 1.0. REAN contains post analysis programs REAN1 and REAN2.

<sup>4</sup>REAN1 actually runs the post analysis programs that create the REP file.

<sup>5</sup>REAN converts all REX's to Hewlett indices and names all unnamed peaks so the file can be analyzed based on Hewlett indices.

<sup>6</sup>REP4 lists the data base contents.

<sup>7</sup>REP7 lists the average concentrations and statistics for each named peak in the data base.

<sup>8</sup>REP6 lists the average R.I. and statistics for each named peak in the data base.

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AMPLITUDE x.25 uV-seconds (Enlarged x 100.00)

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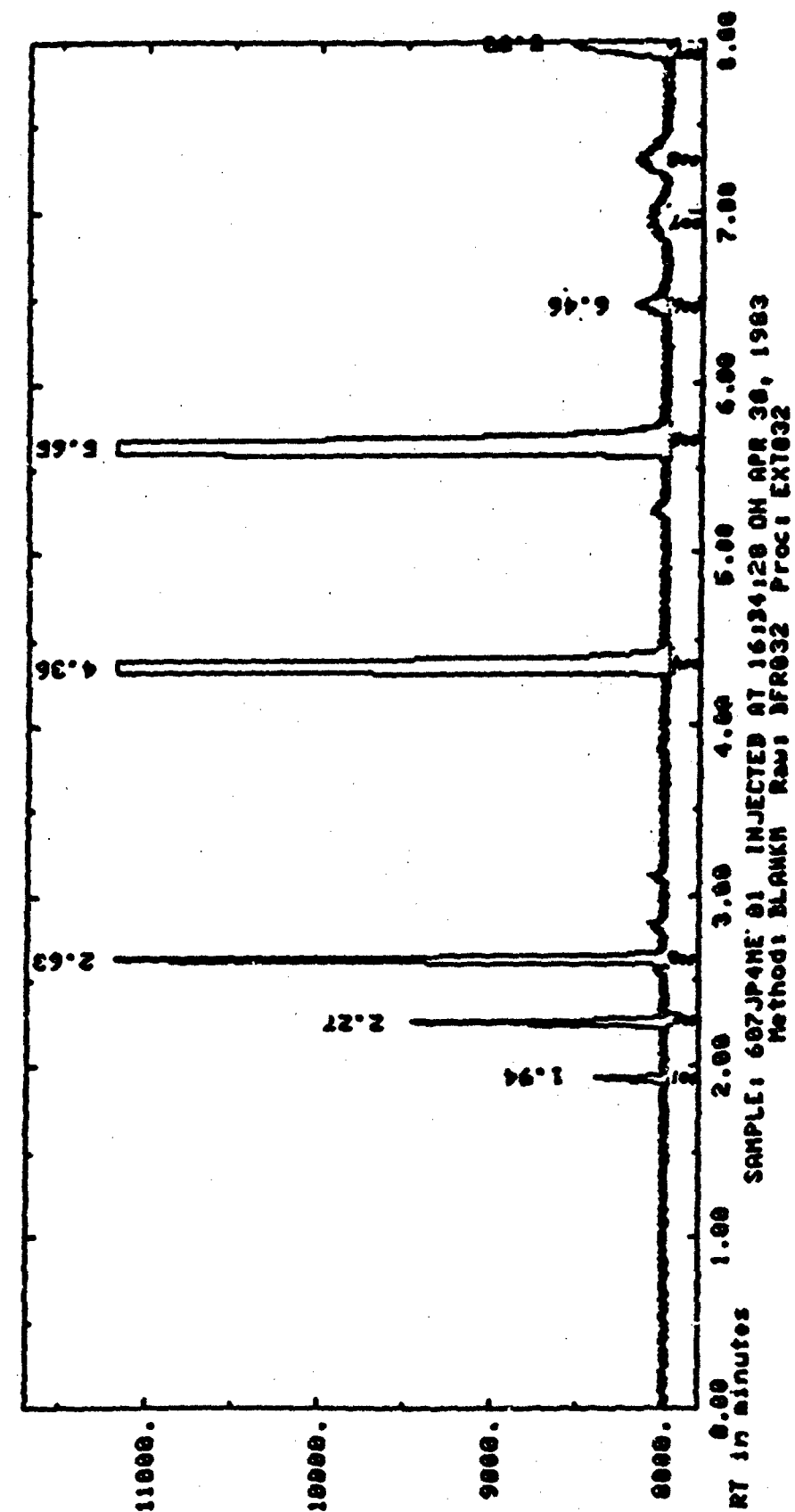


Figure 3. Correlation of Feature Identifications with Chromatogram Peaks in the Reference JP-4 Fuel.

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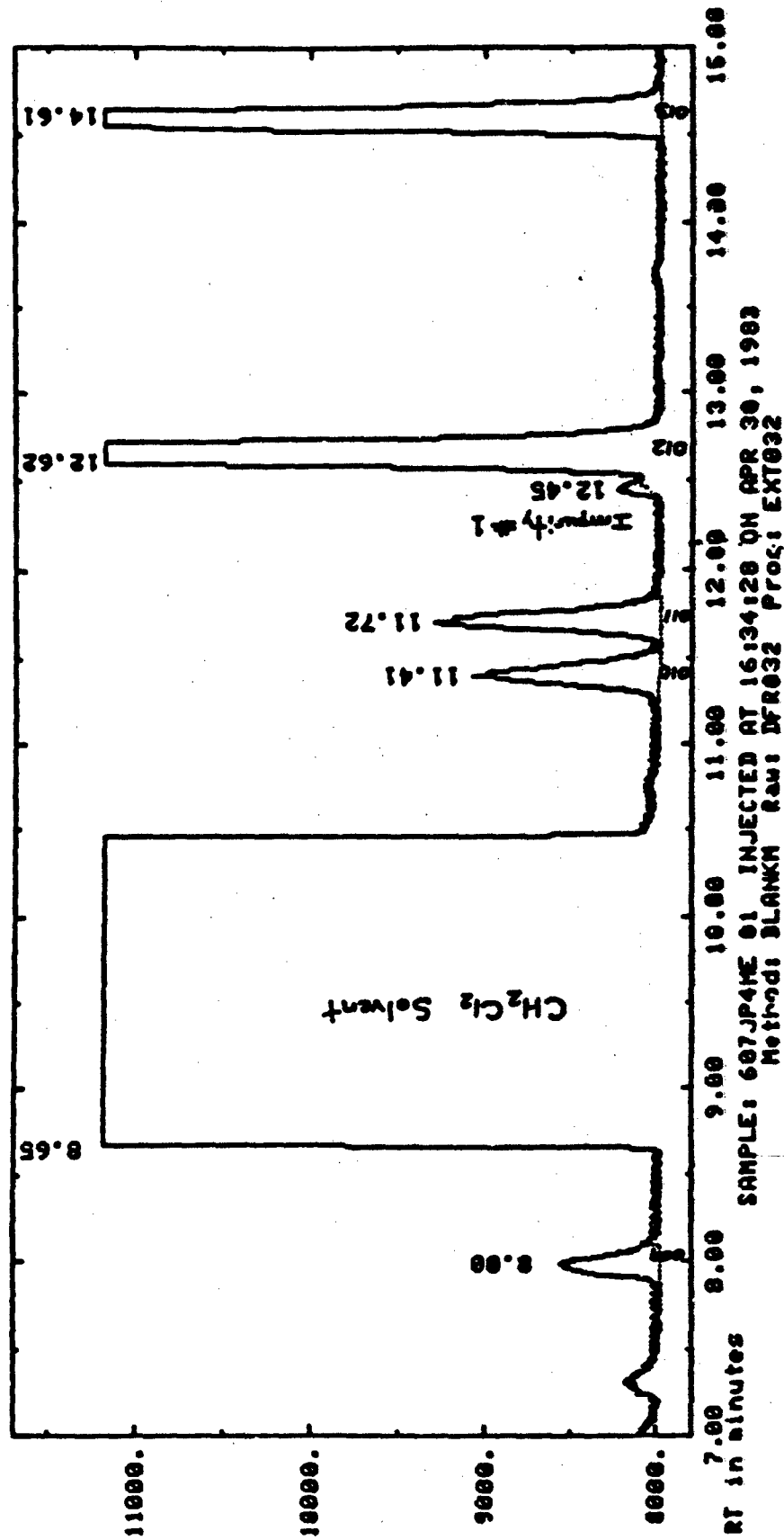


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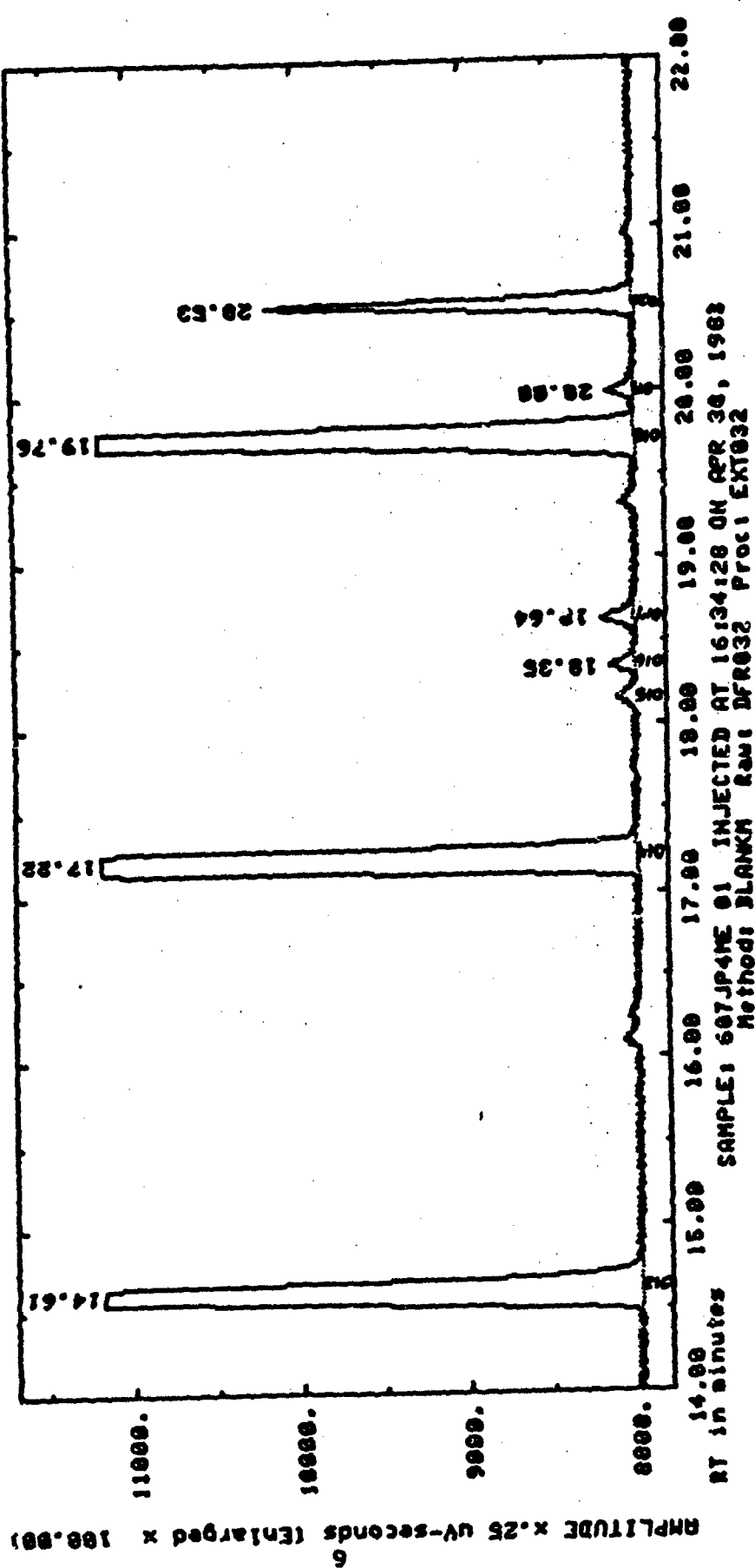


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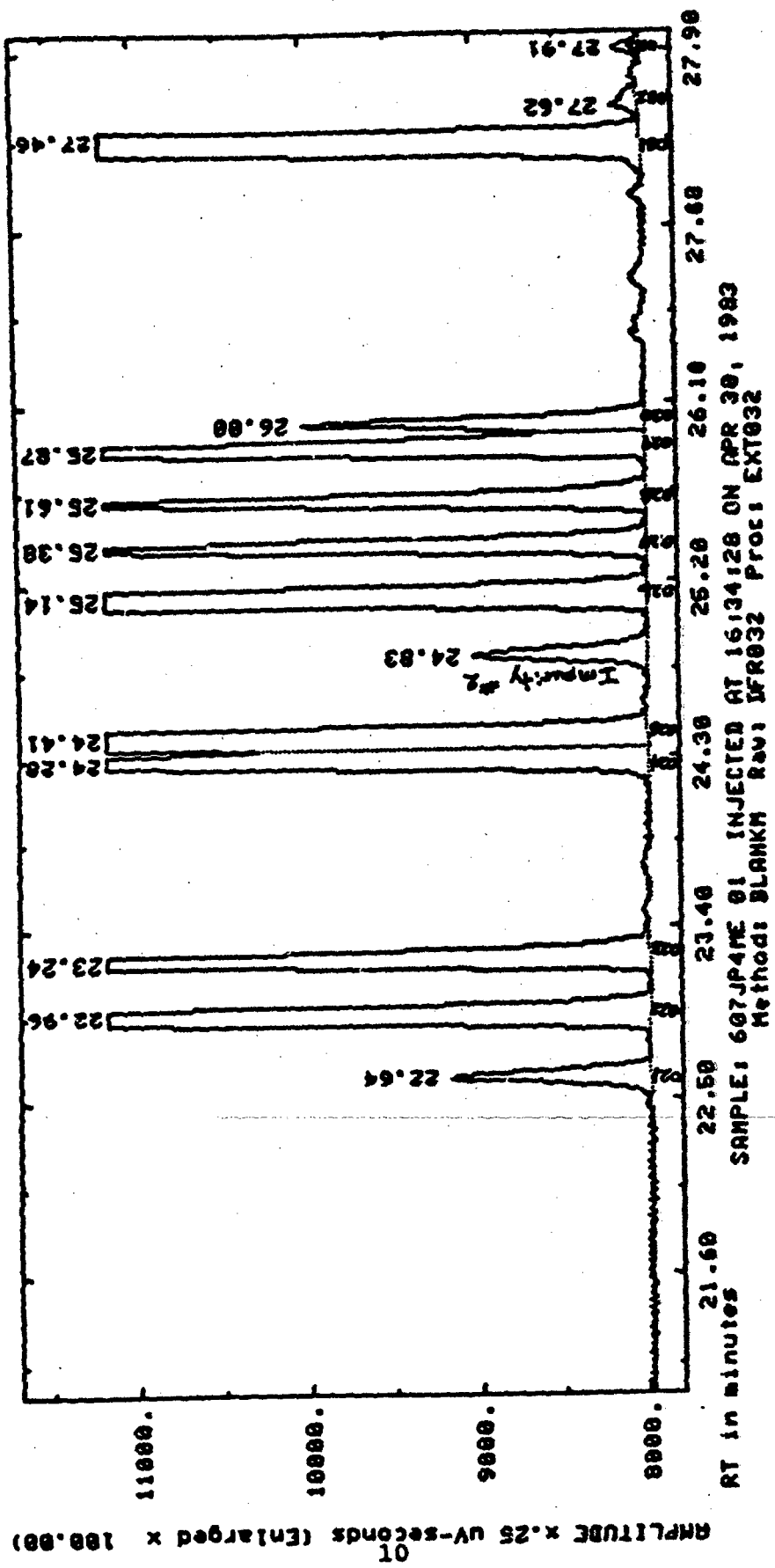


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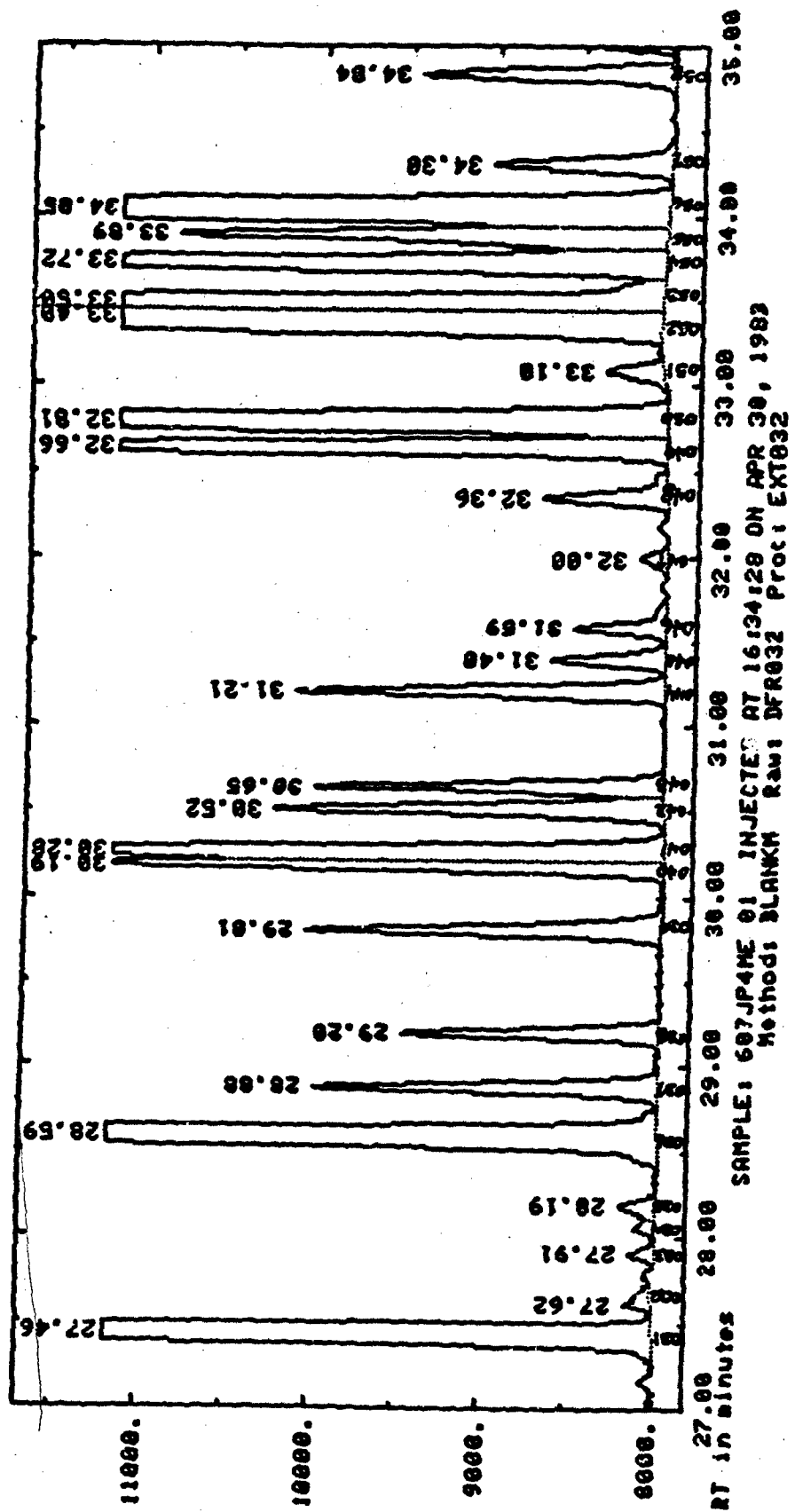


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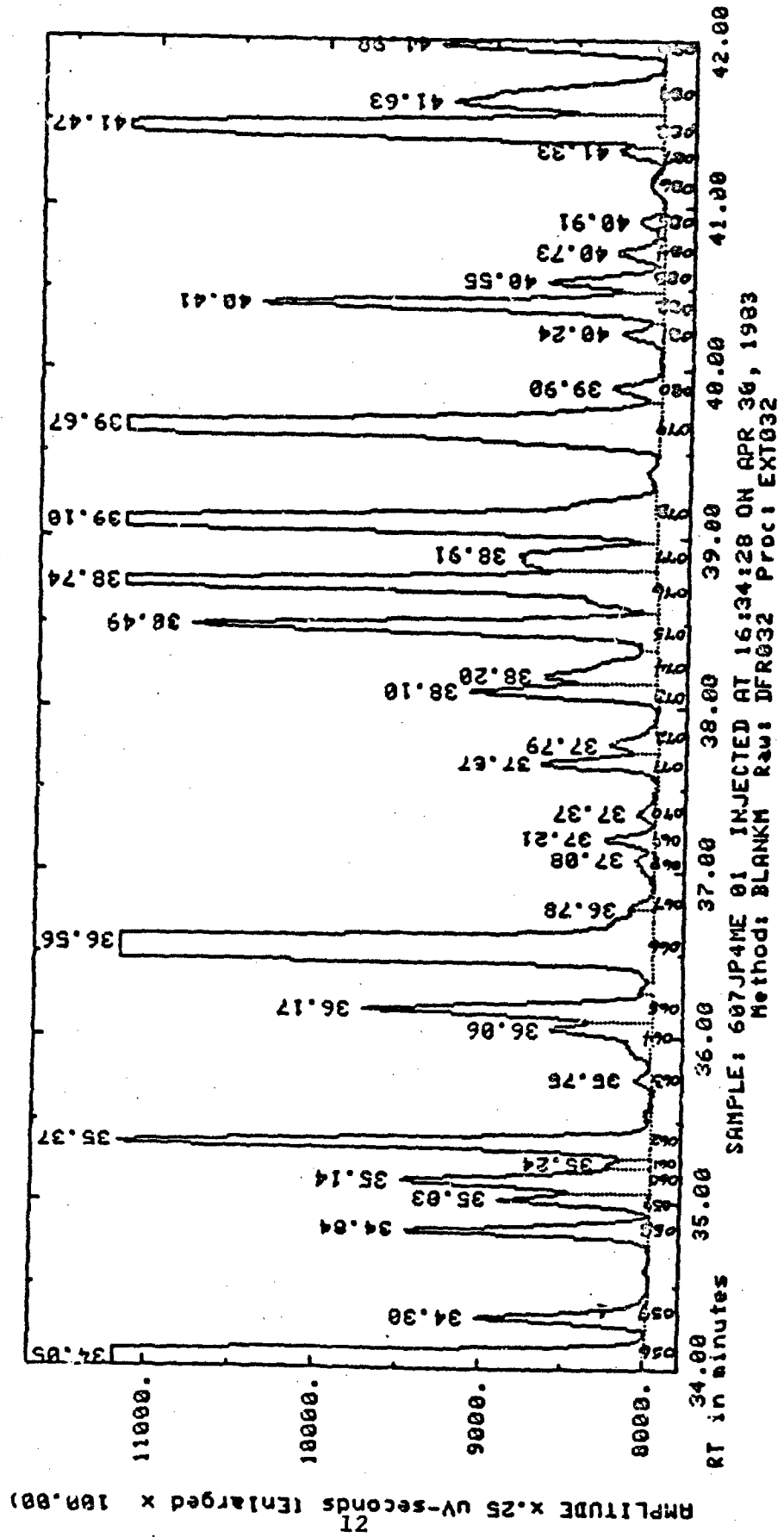


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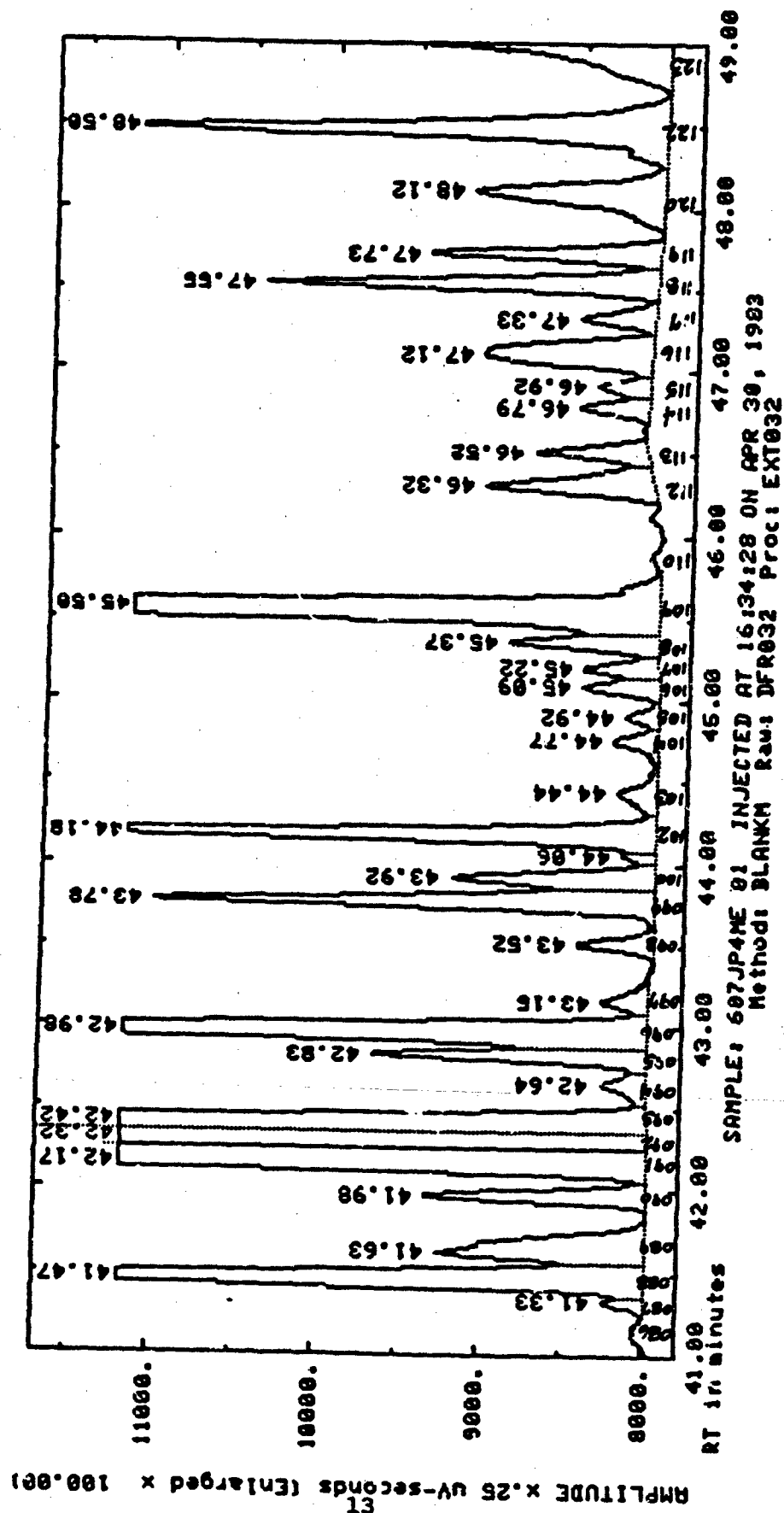


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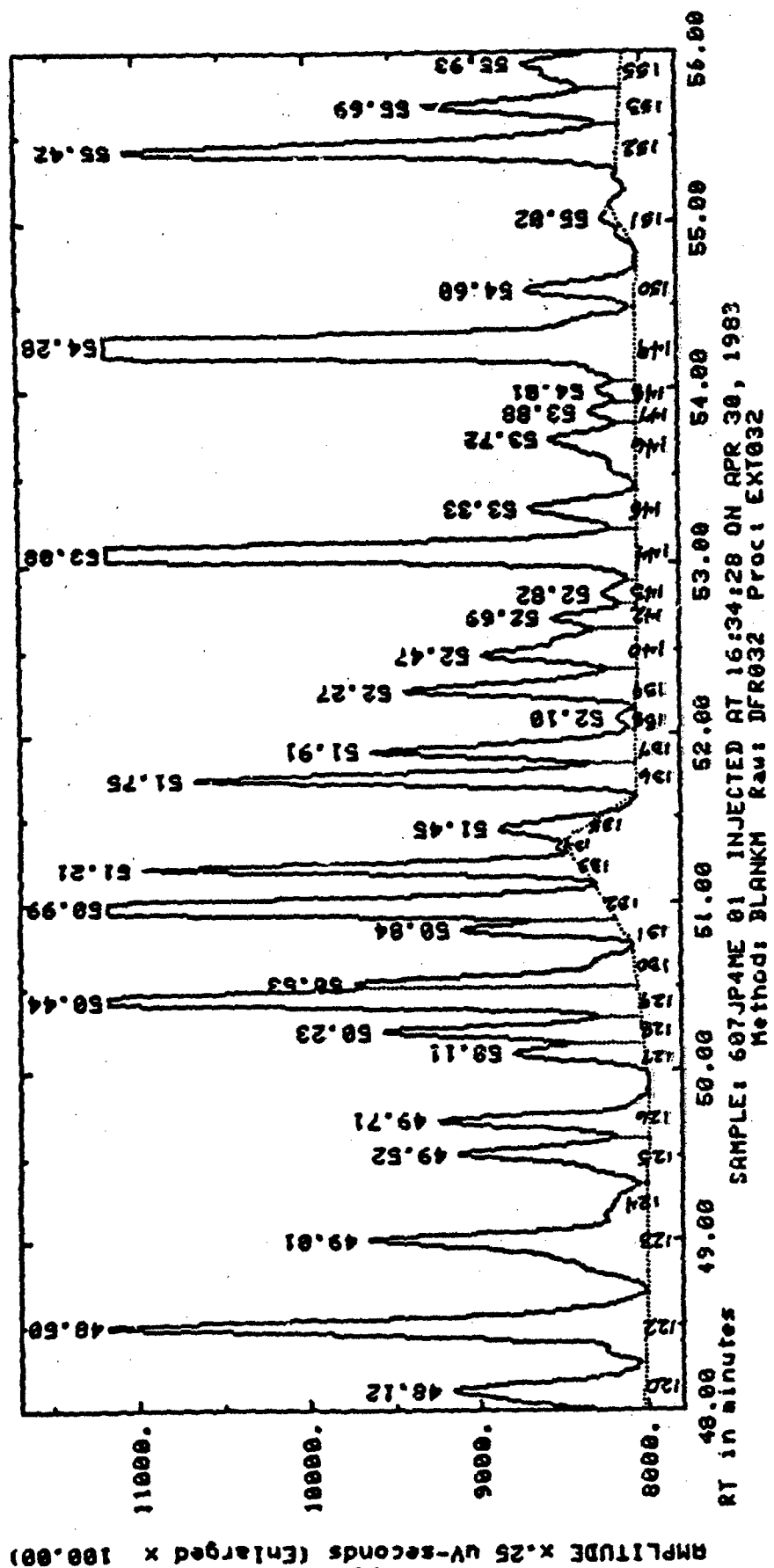


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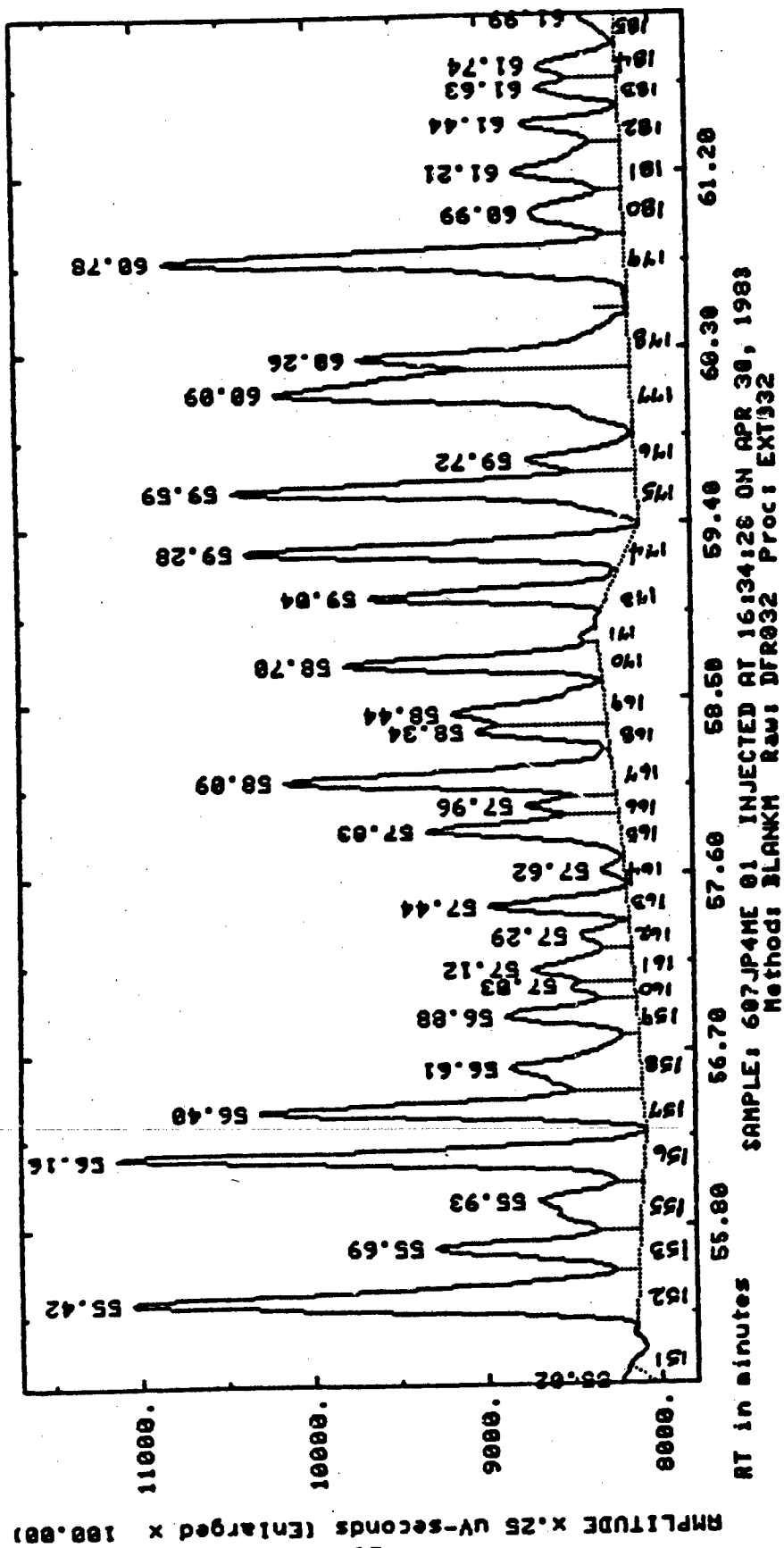


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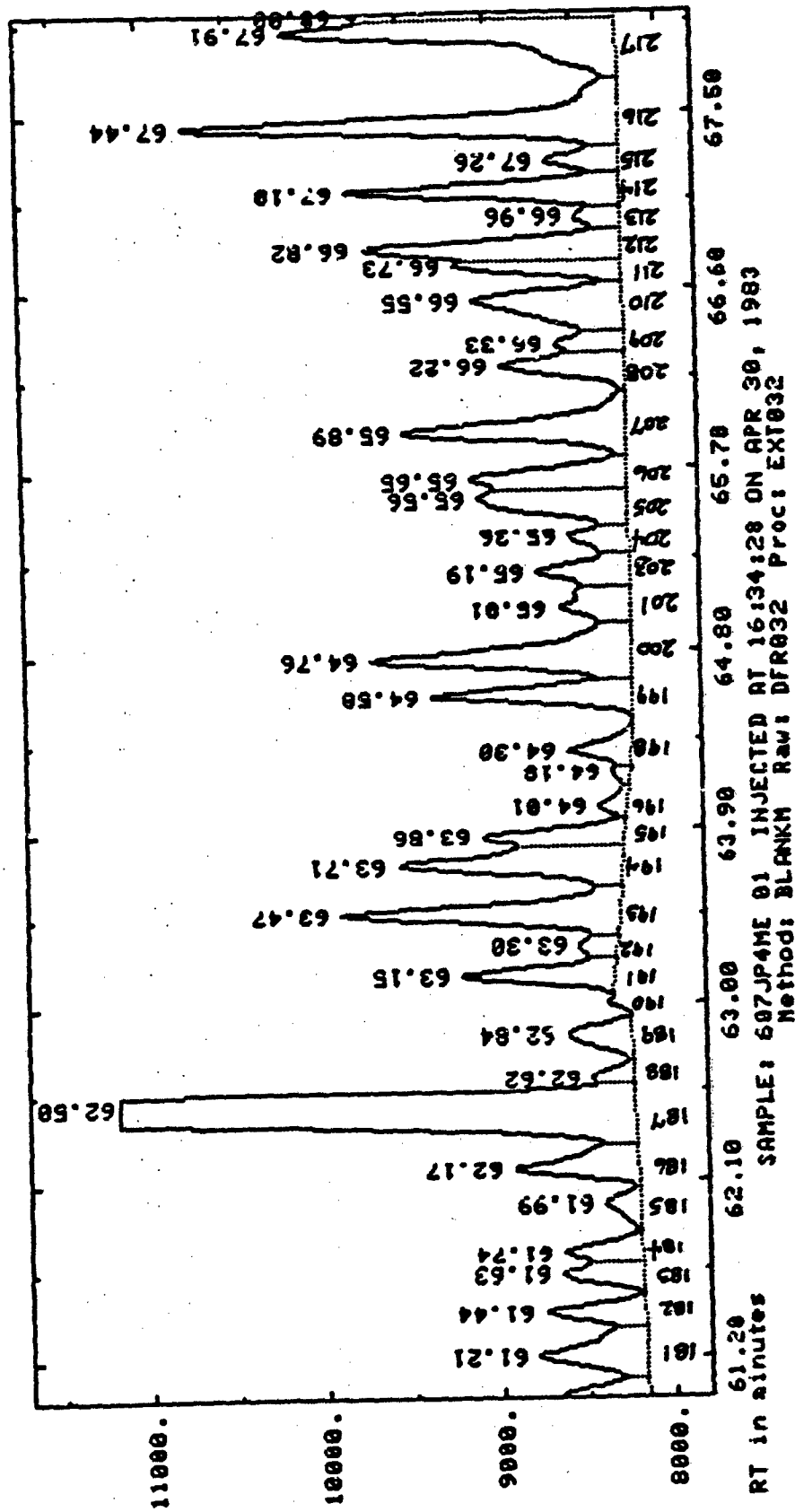


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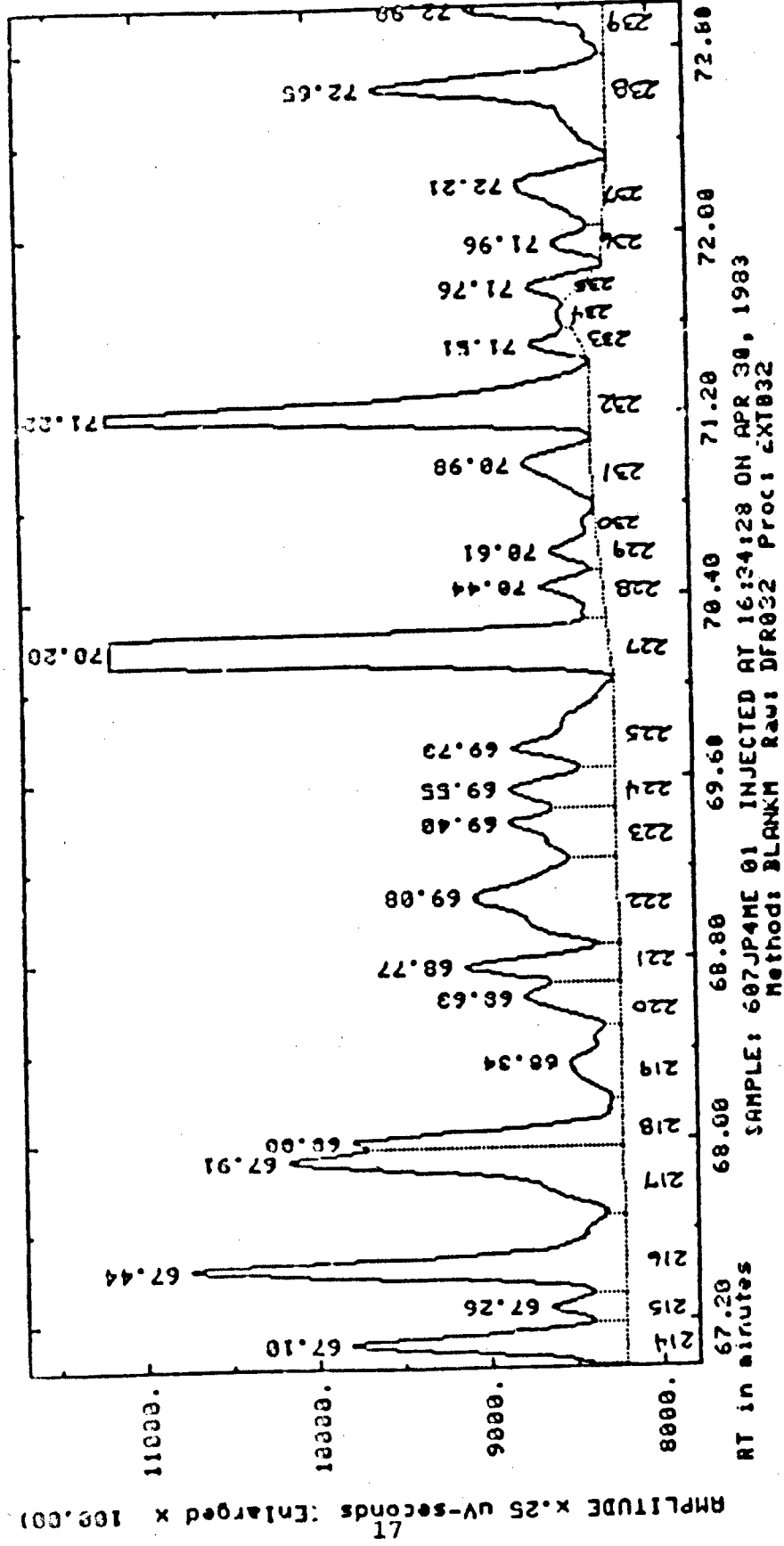


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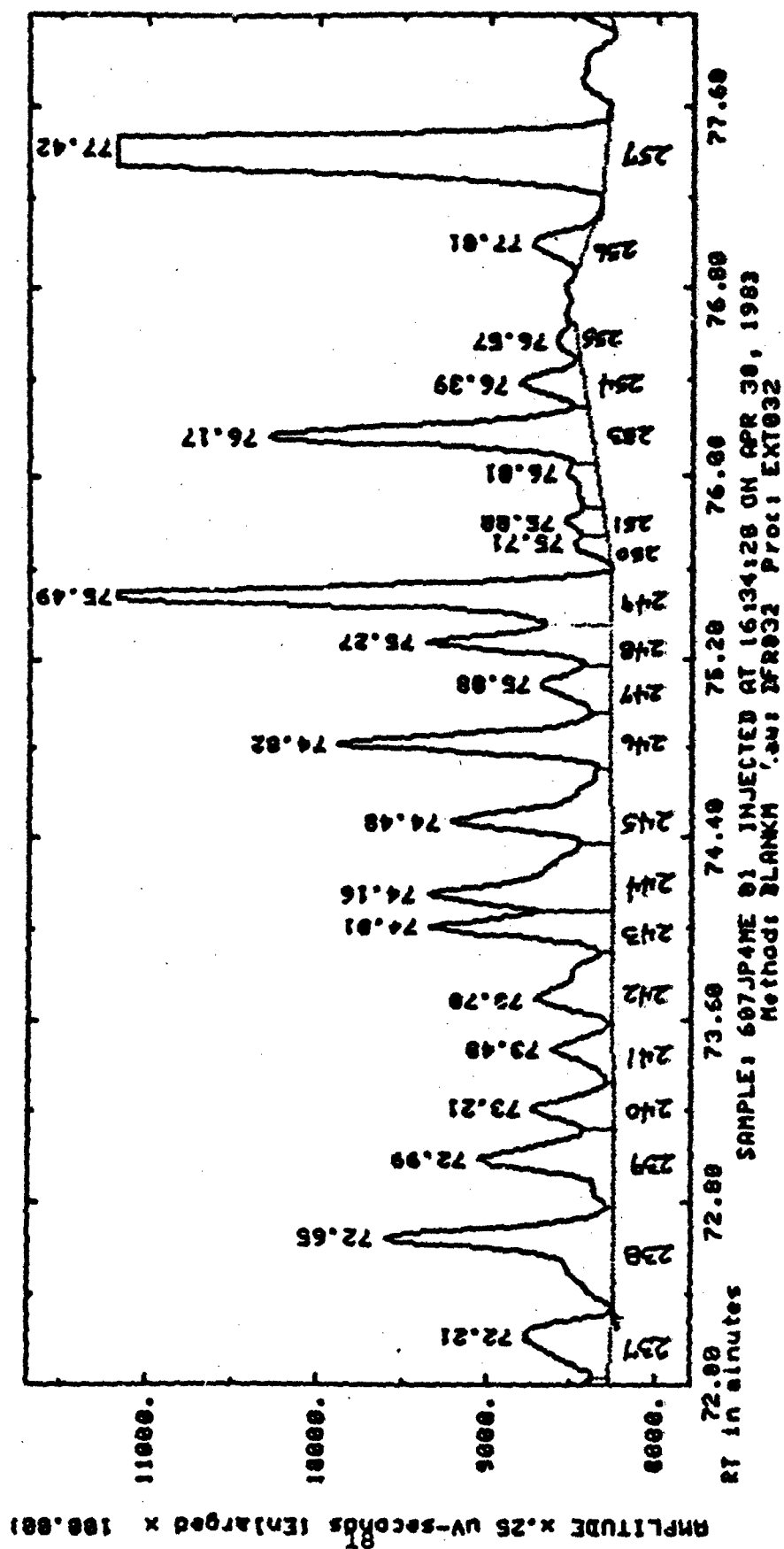


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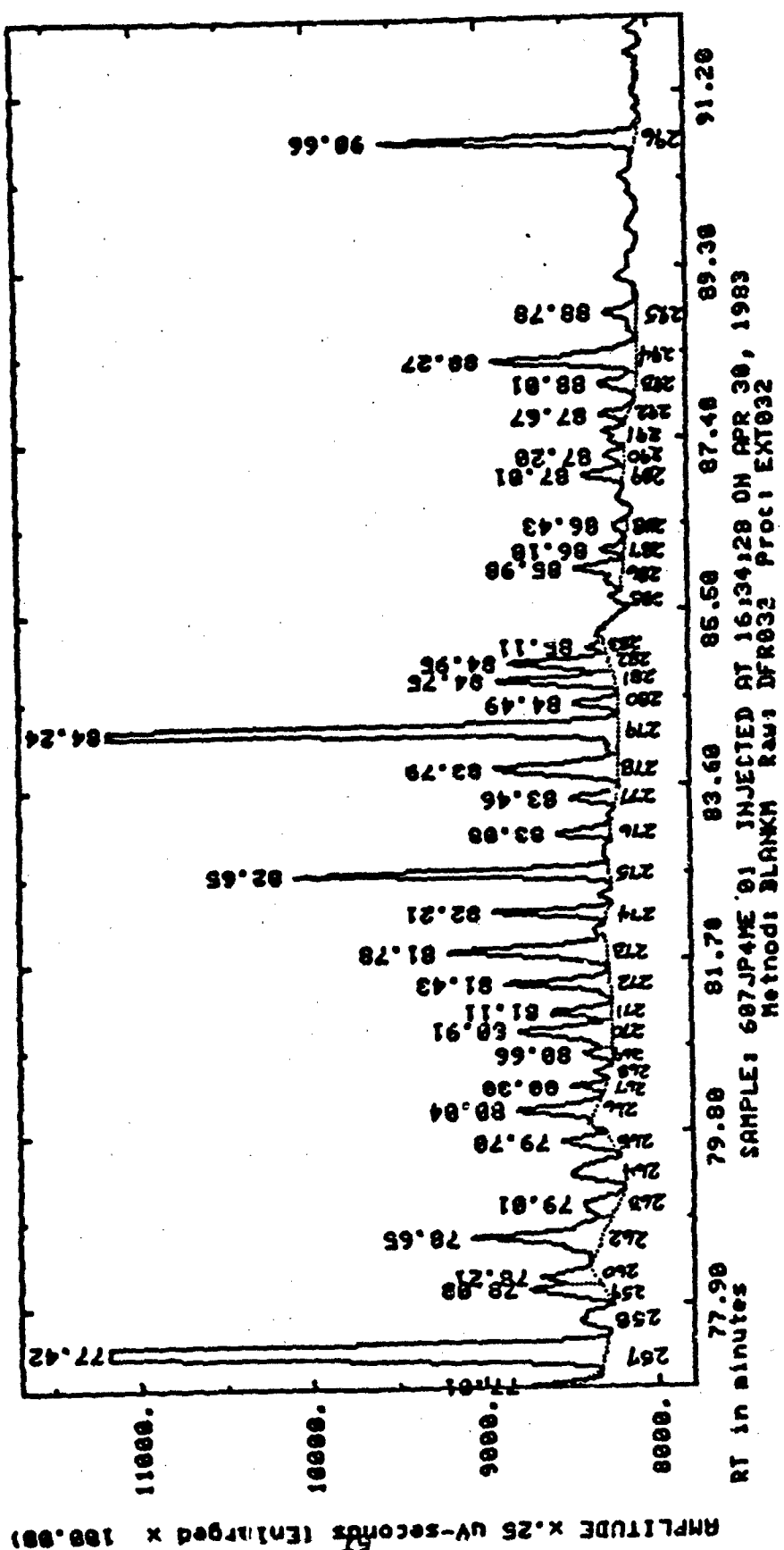


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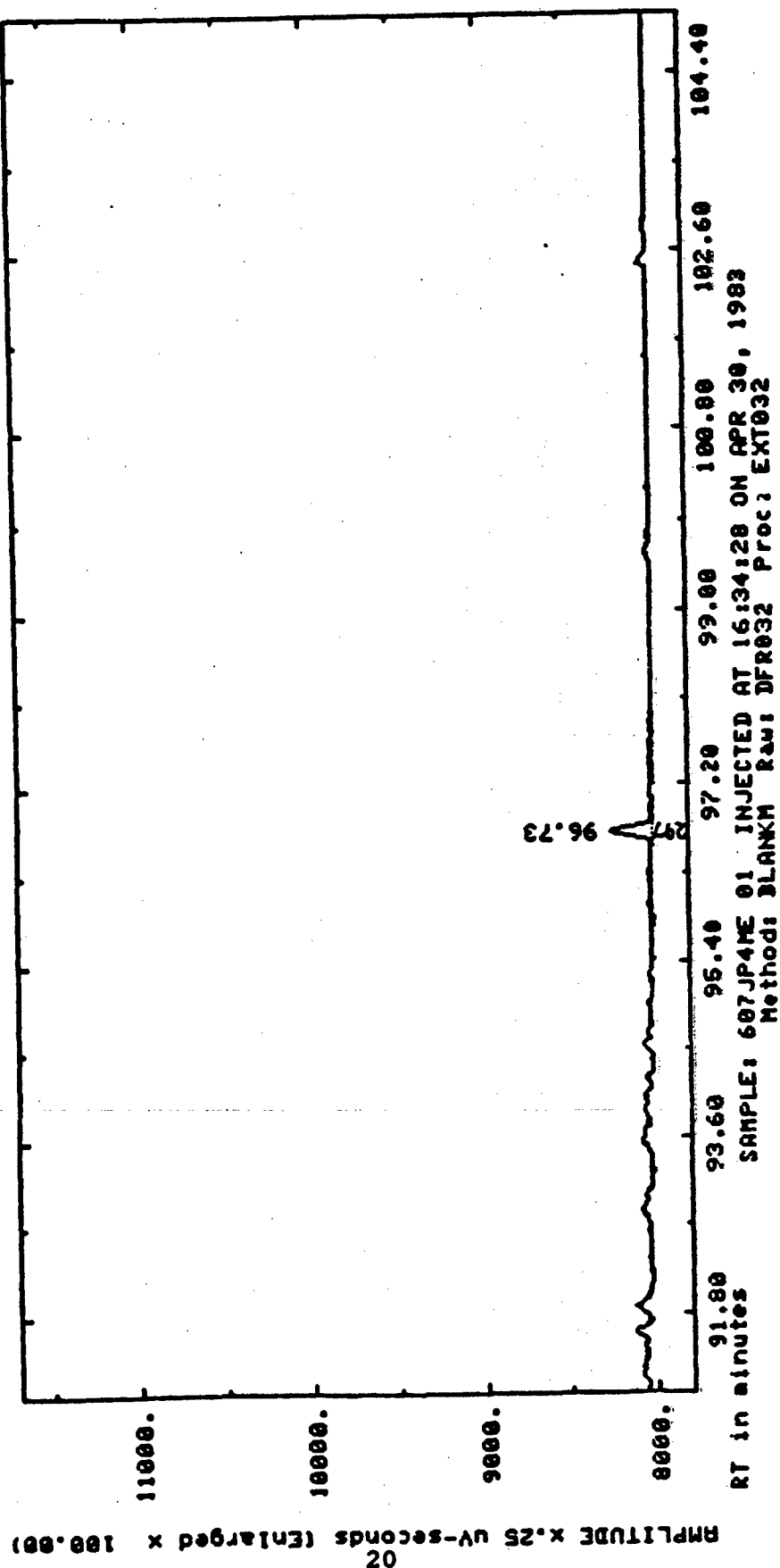


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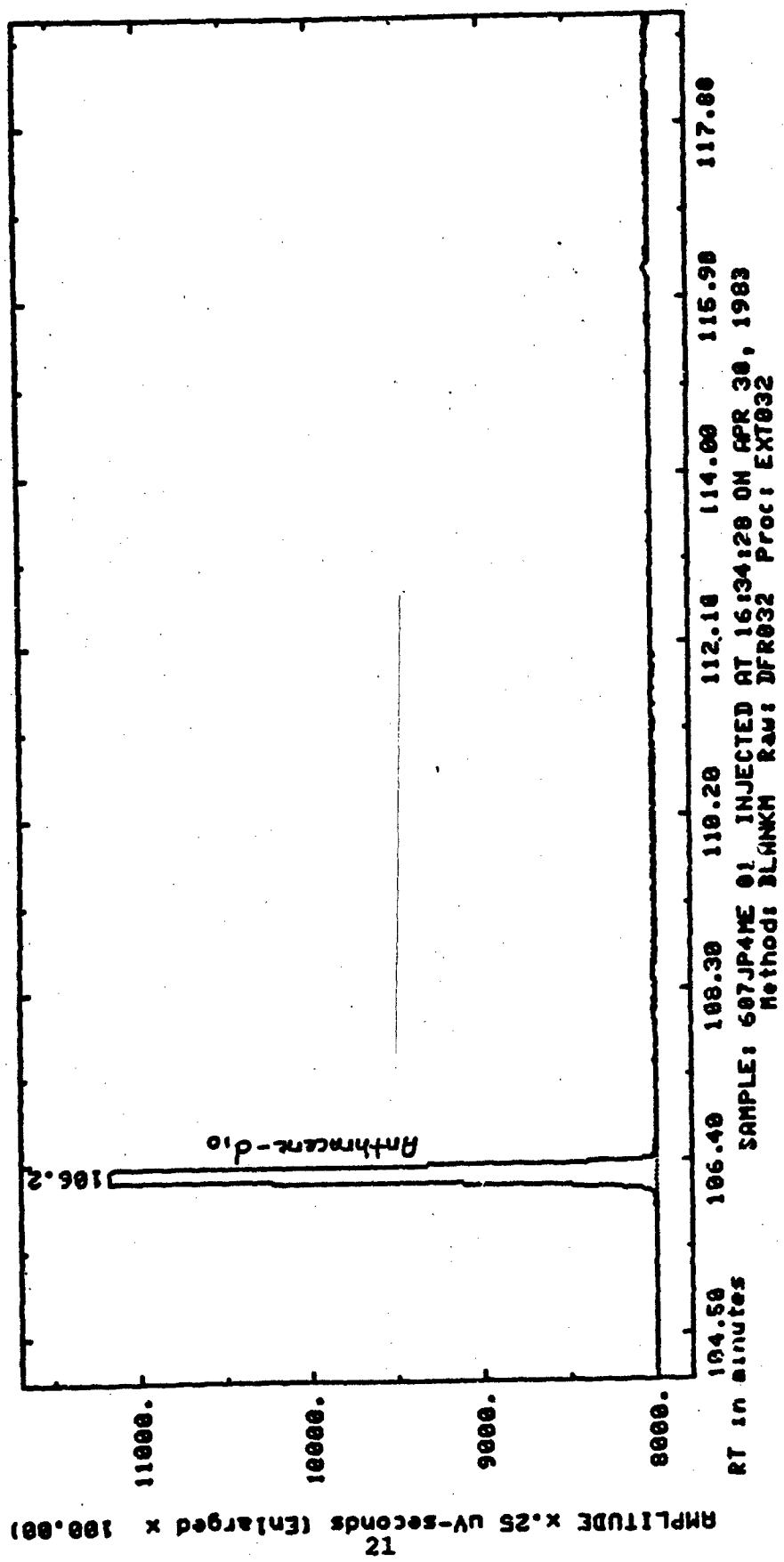


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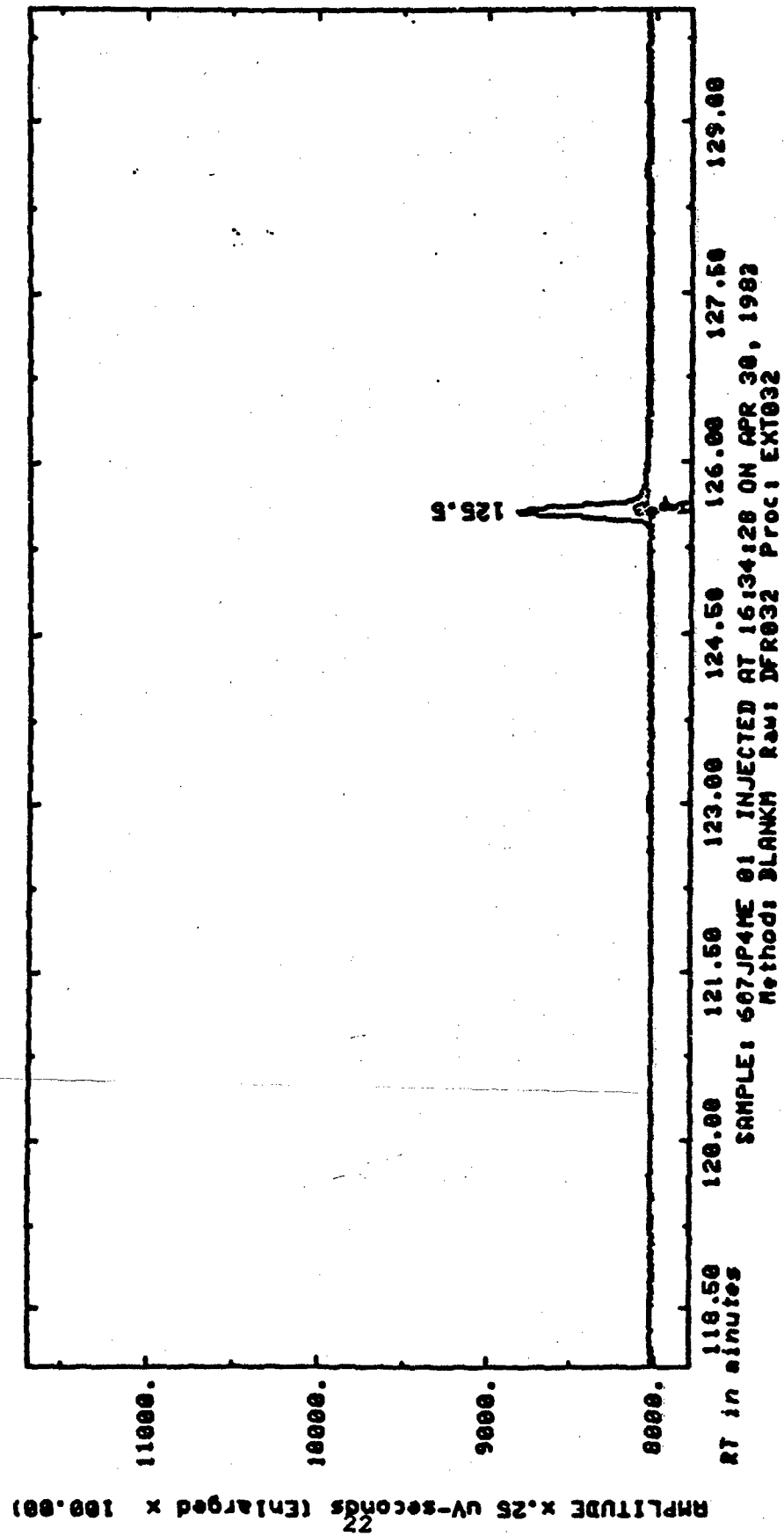


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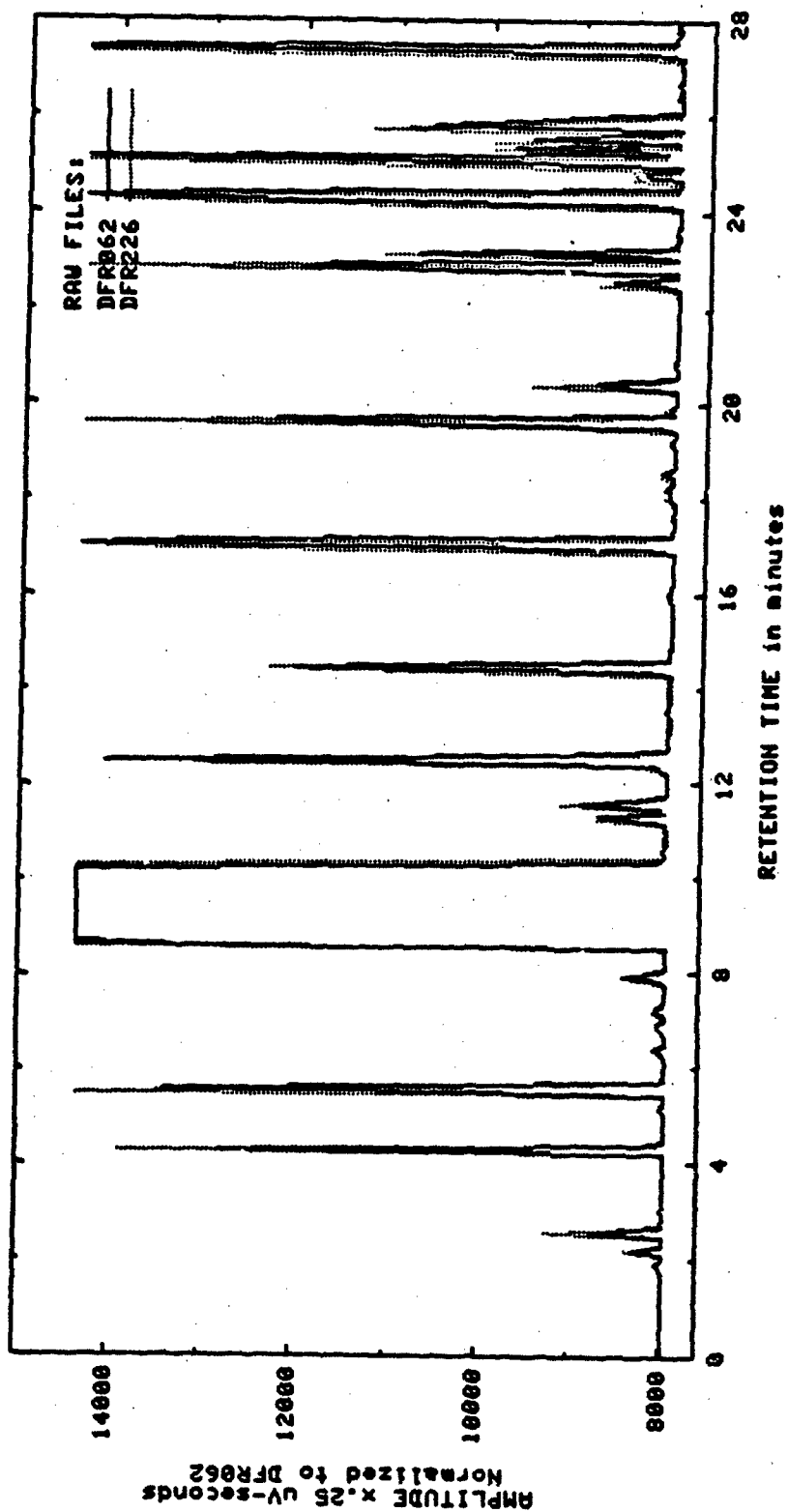


Figure 4. Comparison of Chromatograms Obtained from an Early Injection of the Reference Fuel and a Later Injection of the Fuel.

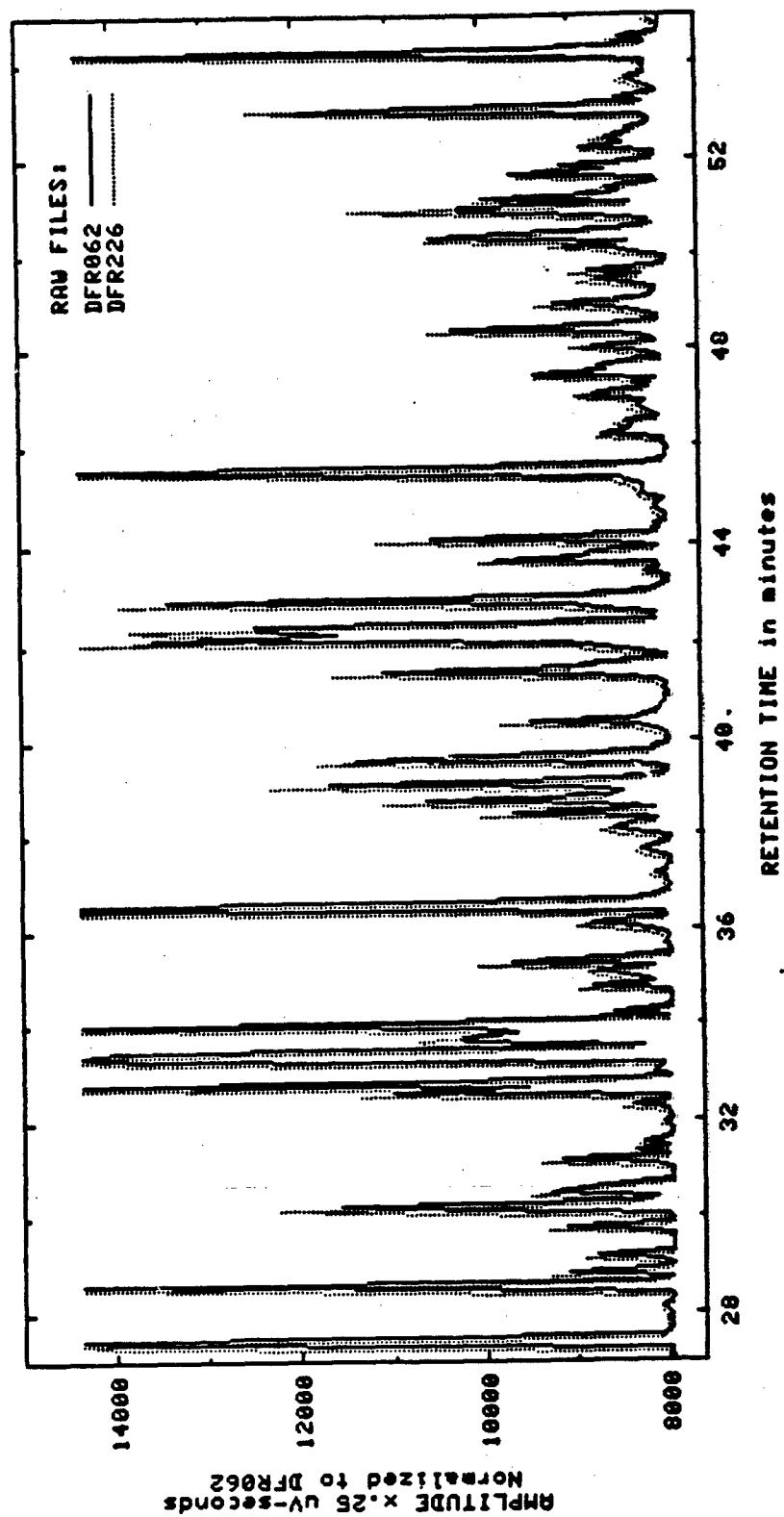


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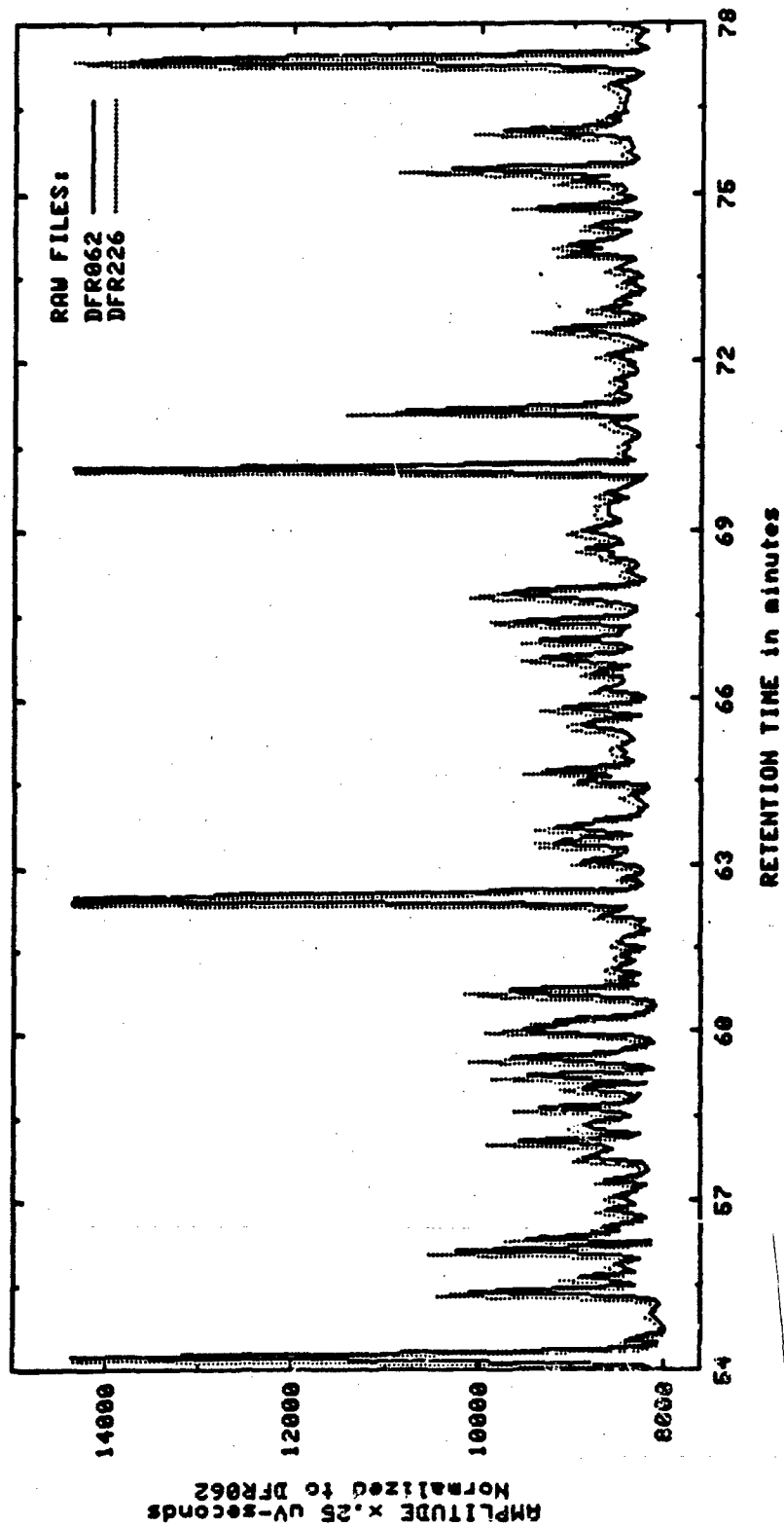


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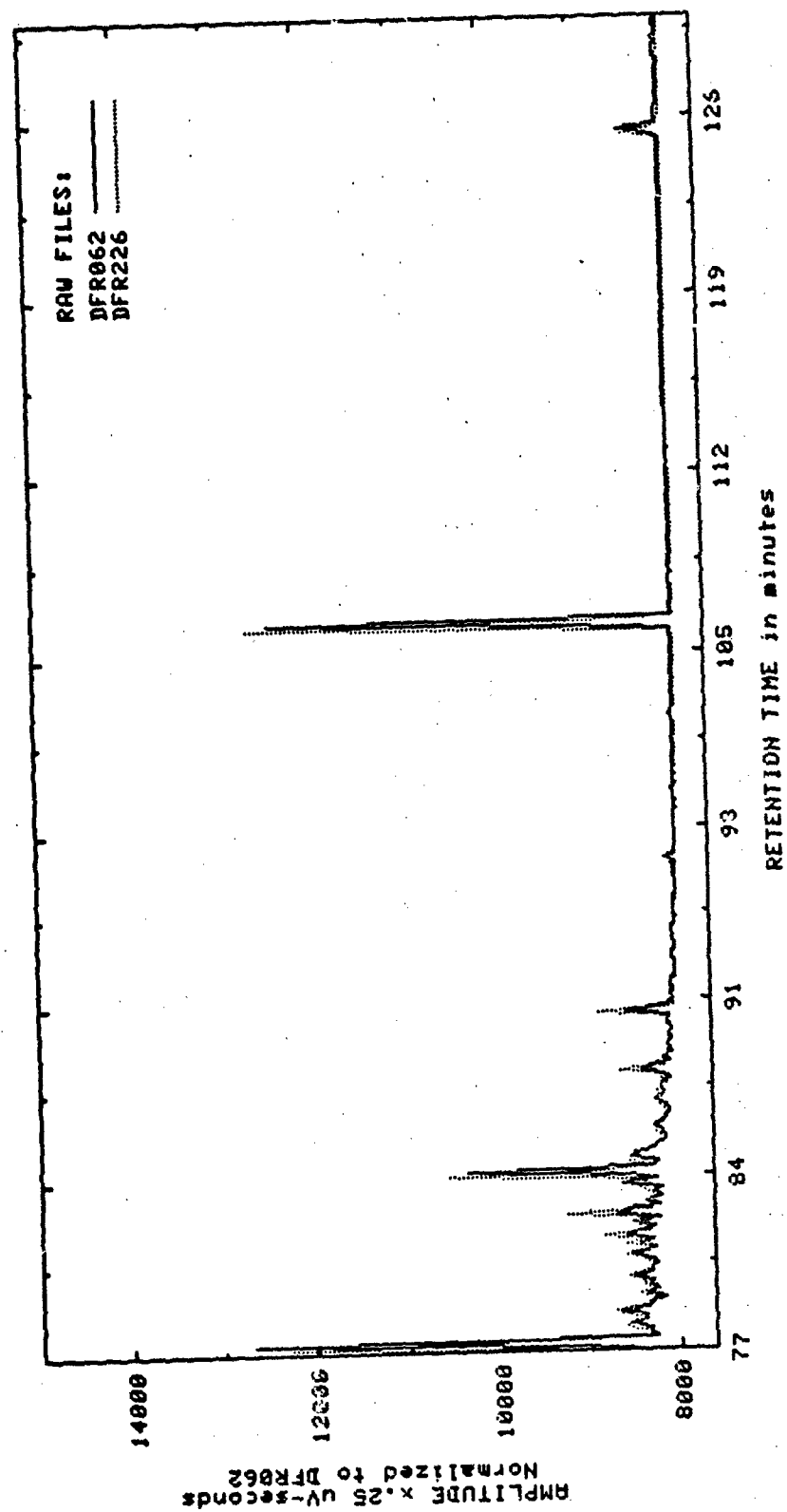


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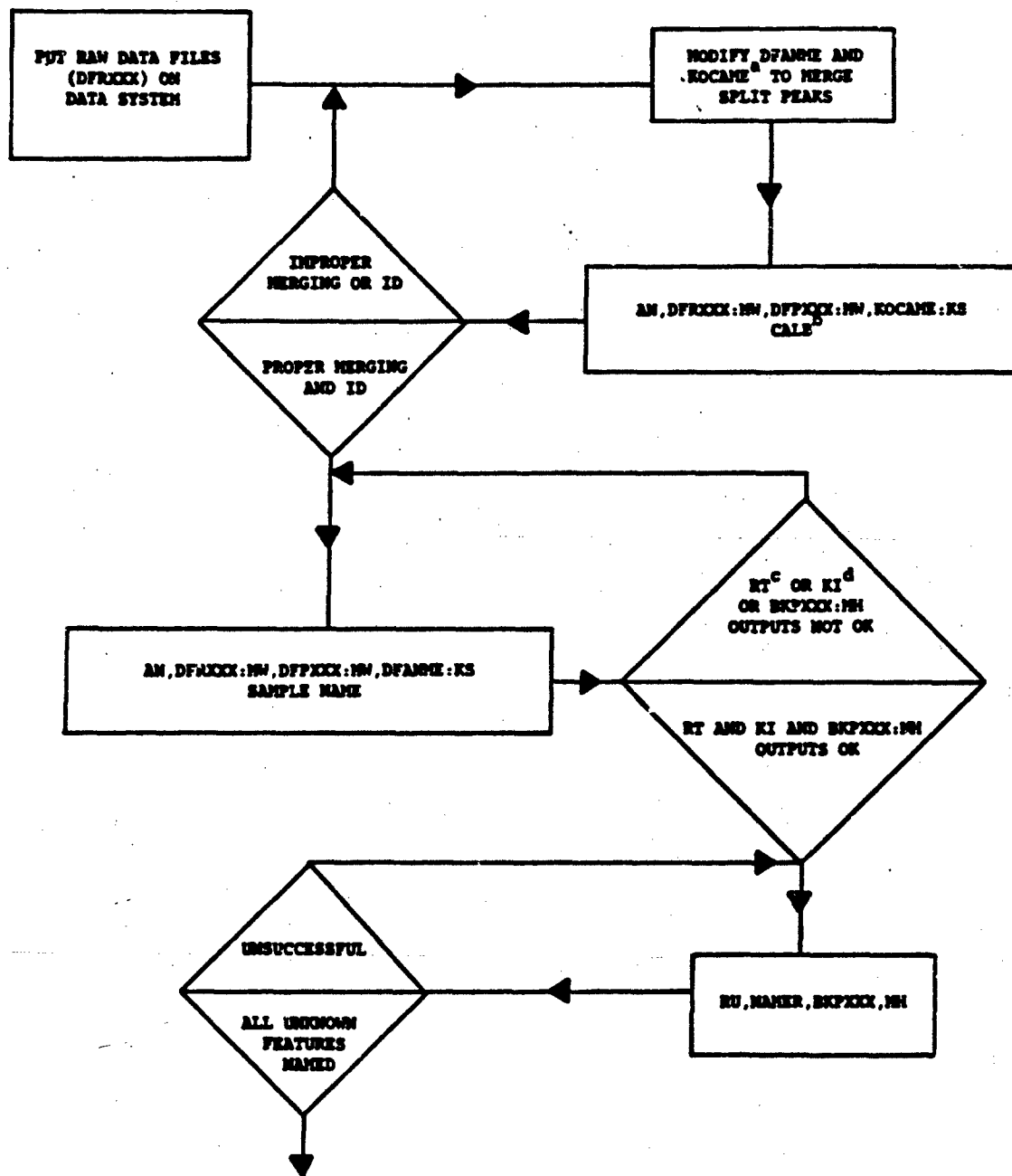
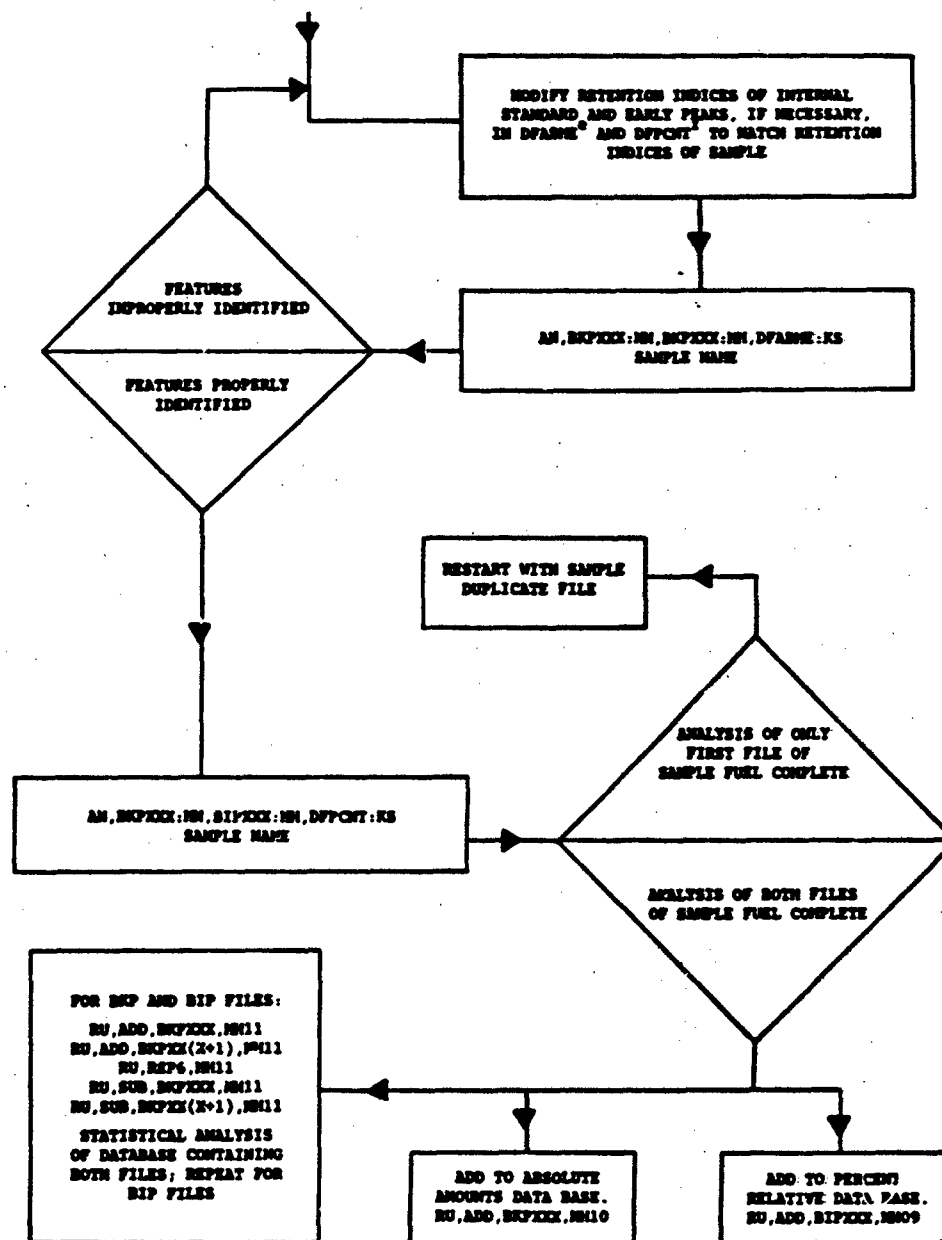


Figure 5. Flow Diagram Used in the Analysis of Data for the 56 Fuel Samples and Duplicates.



<sup>a</sup> KOCANE is a copy of DFANME used for calibration so that corrections to the factors during calibration do not affect the final concentration calculations. These methods include, as named features, the n-alkanes, impurities and internal standard, and post analysis programs KOVPG1 and FILEA.

<sup>b</sup> CALB is used as a temporary sample name and triggers the calibration of FILEA.

<sup>c</sup> If the BKPKX:NM file was not formed, it may be created at this point by running: NUN,KOVAT,DFFPKX,NM.

<sup>d</sup> Each file must be processed through this step before beginning another file because the contents of FILEA will be altered by the next calibration.

<sup>e</sup> DFANME is the master method for calculating absolute amounts and contains named features for all features identified in the Reference Fuel. DFFCNT calculates the percent relative to the reference fuel for these features.

<sup>f</sup> Alternatively, :TR,FIADD,NM10,BKPKX.

Figure 5 (Concluded)

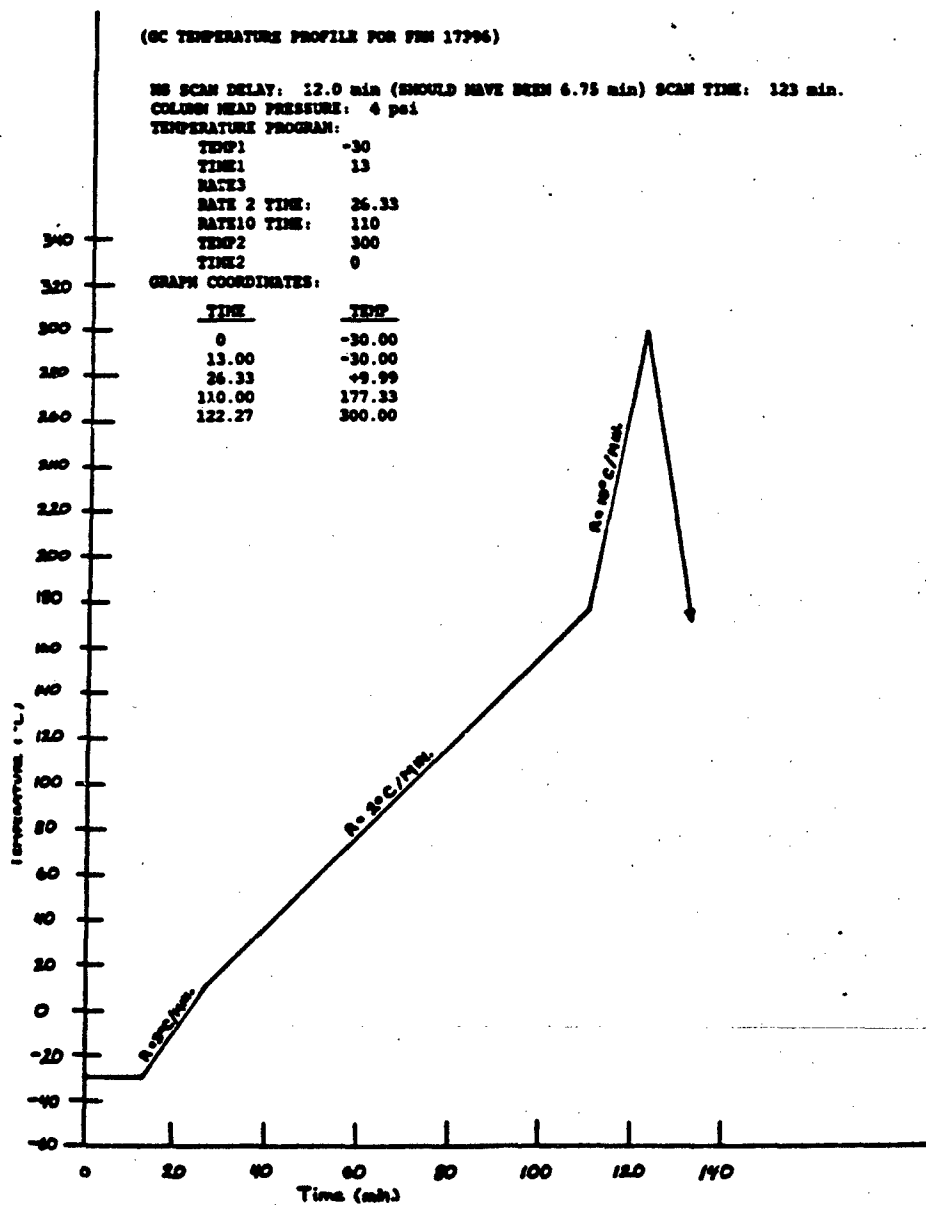


Figure 6. GC Oven Temperature Profile for Reference Fuel.

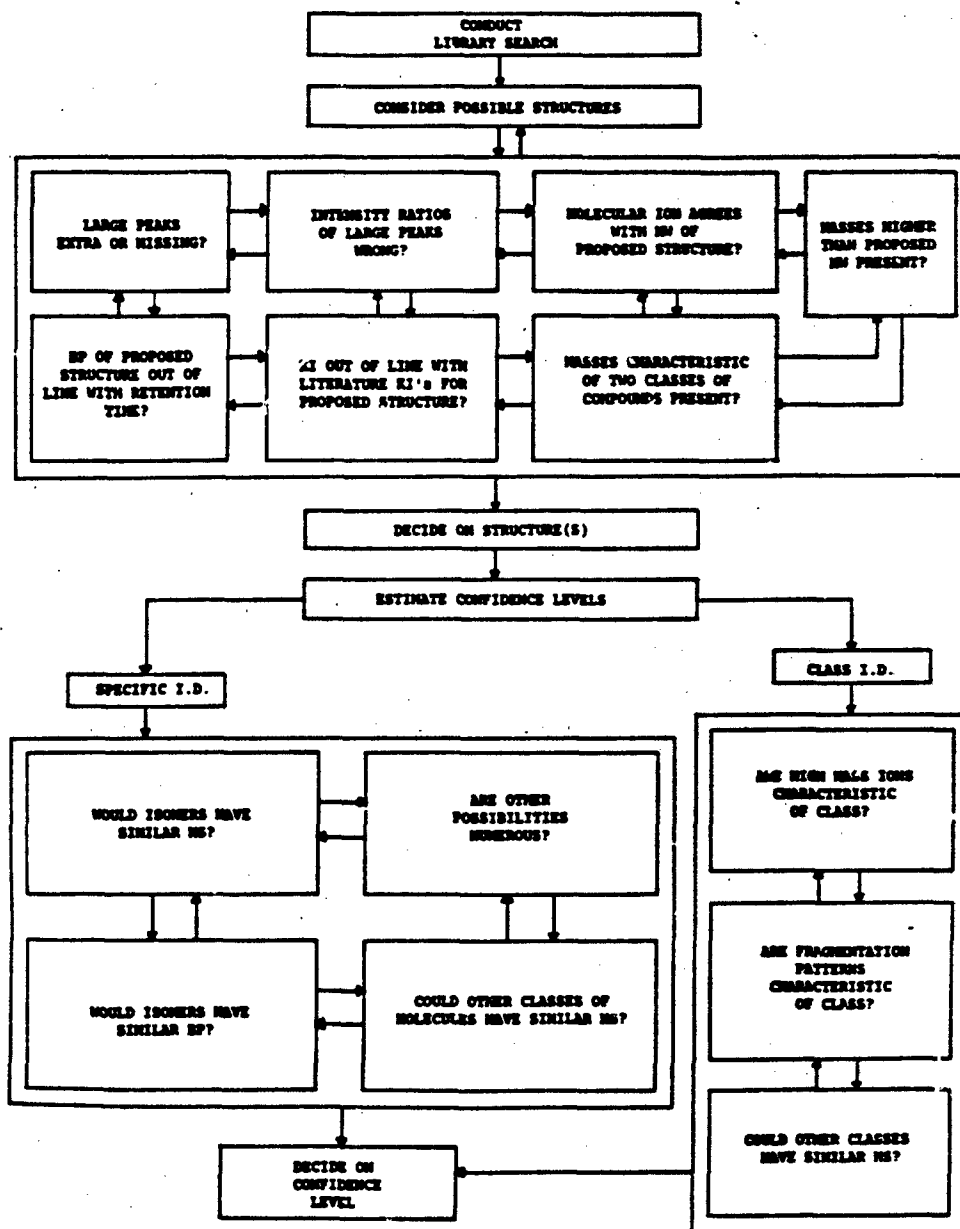


Figure 7. Identification Scheme for Components in Reference Fuel.

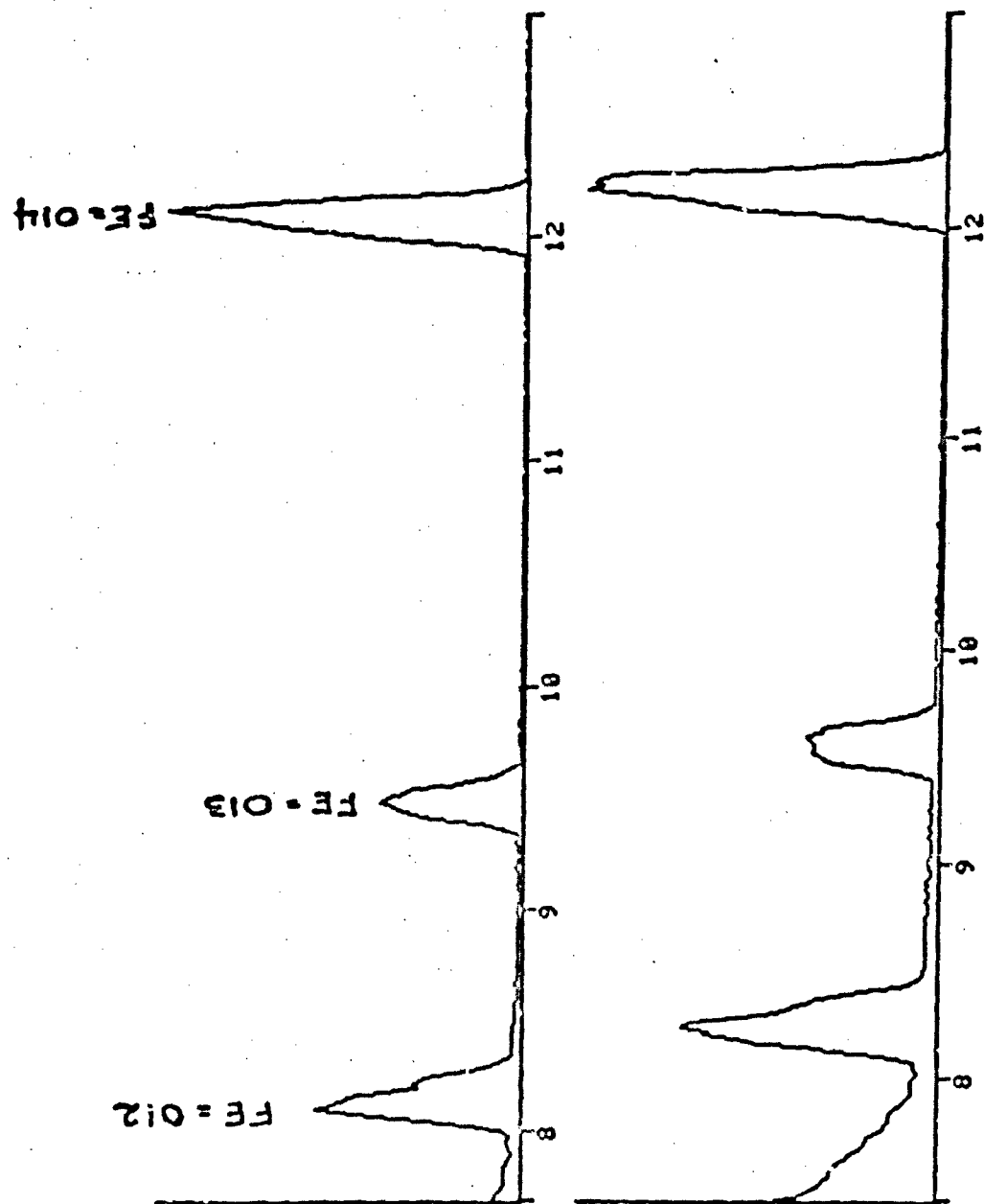


Figure 8. Identification of GC/MS Features and Comparison of an Early GC/MS Chromatogram of the Reference Fuel with a Chromatogram Obtained at the End of GC/MS Data Acquisition.

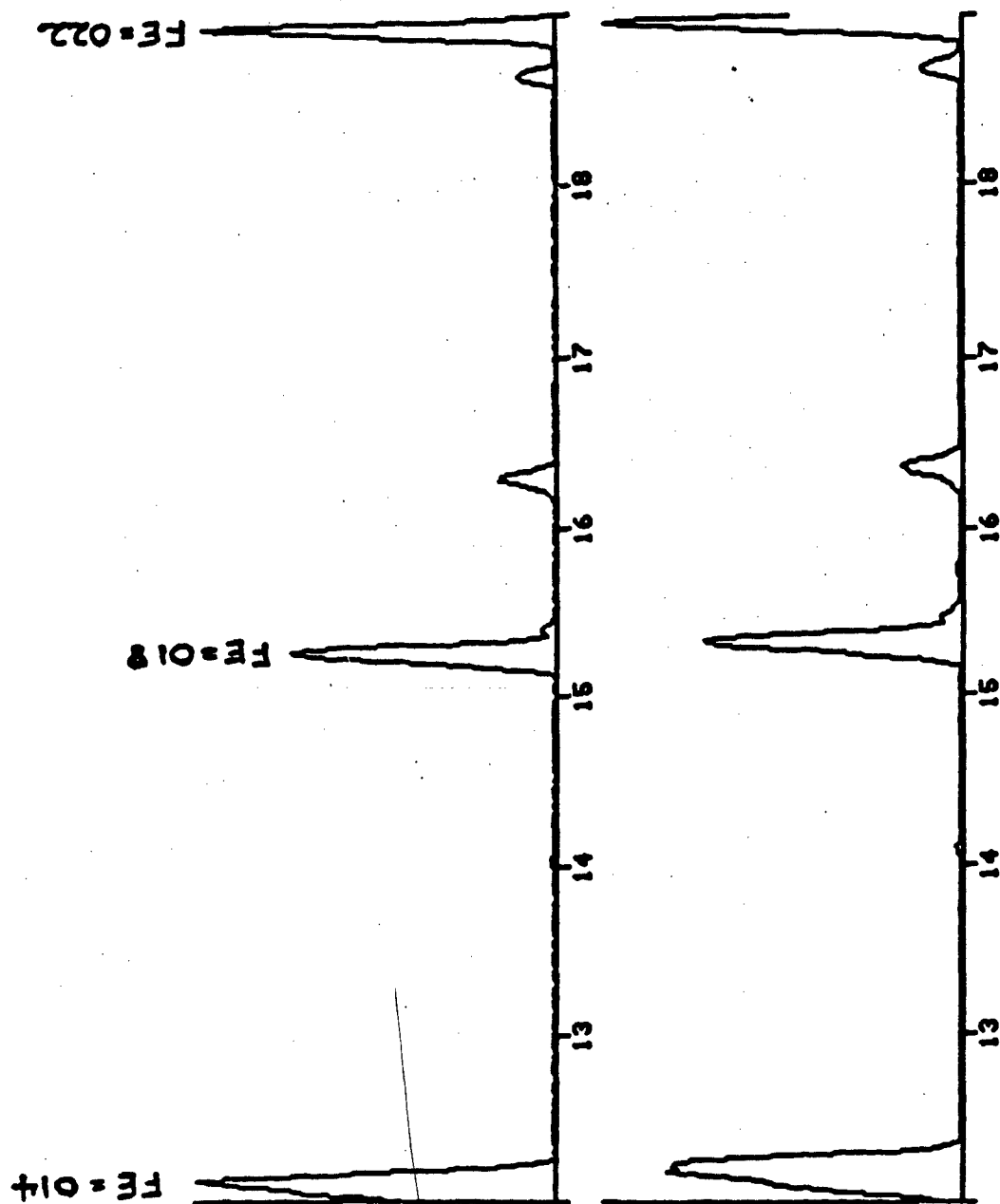


Figure 8 (continued)

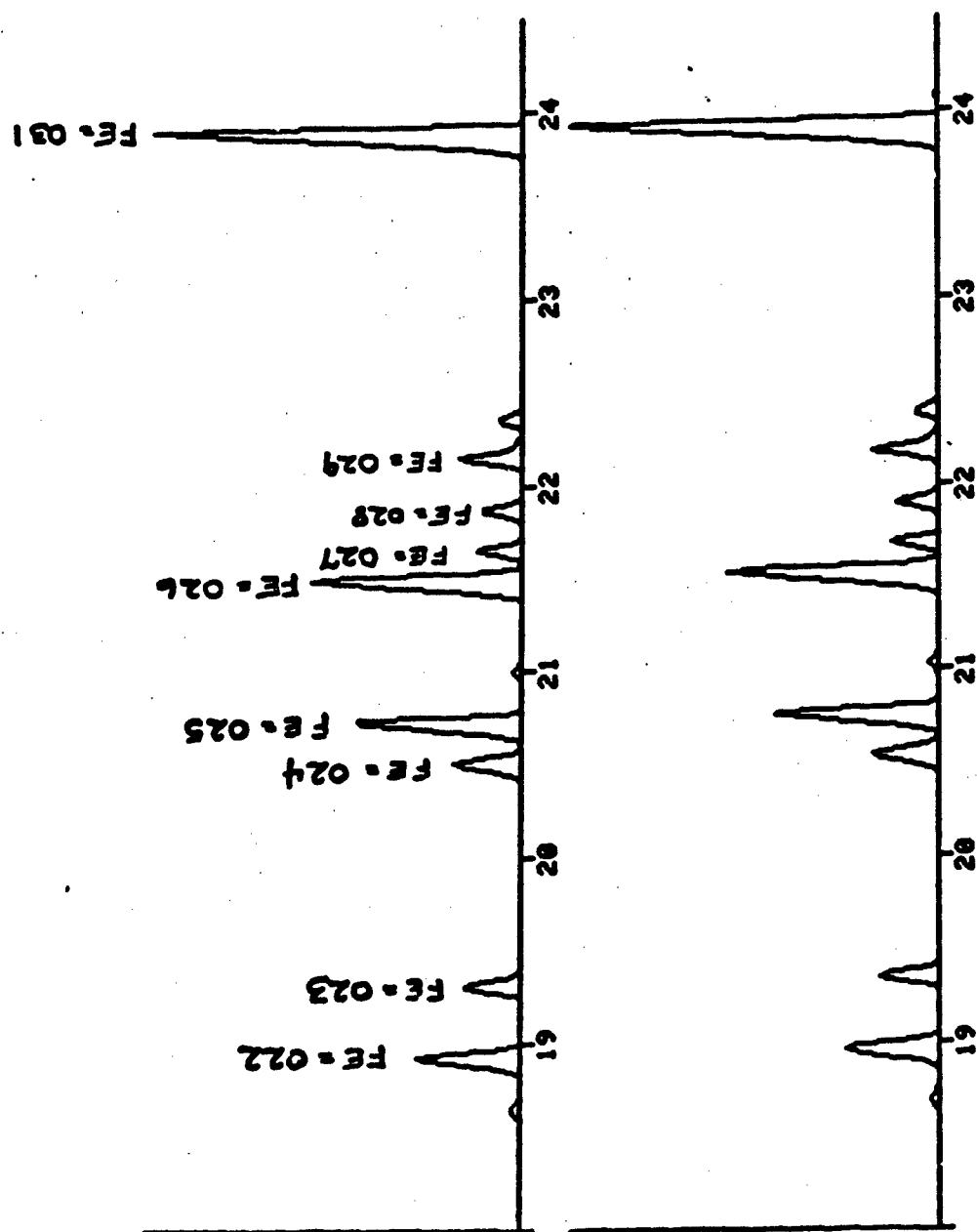


Figure 8 (continued)

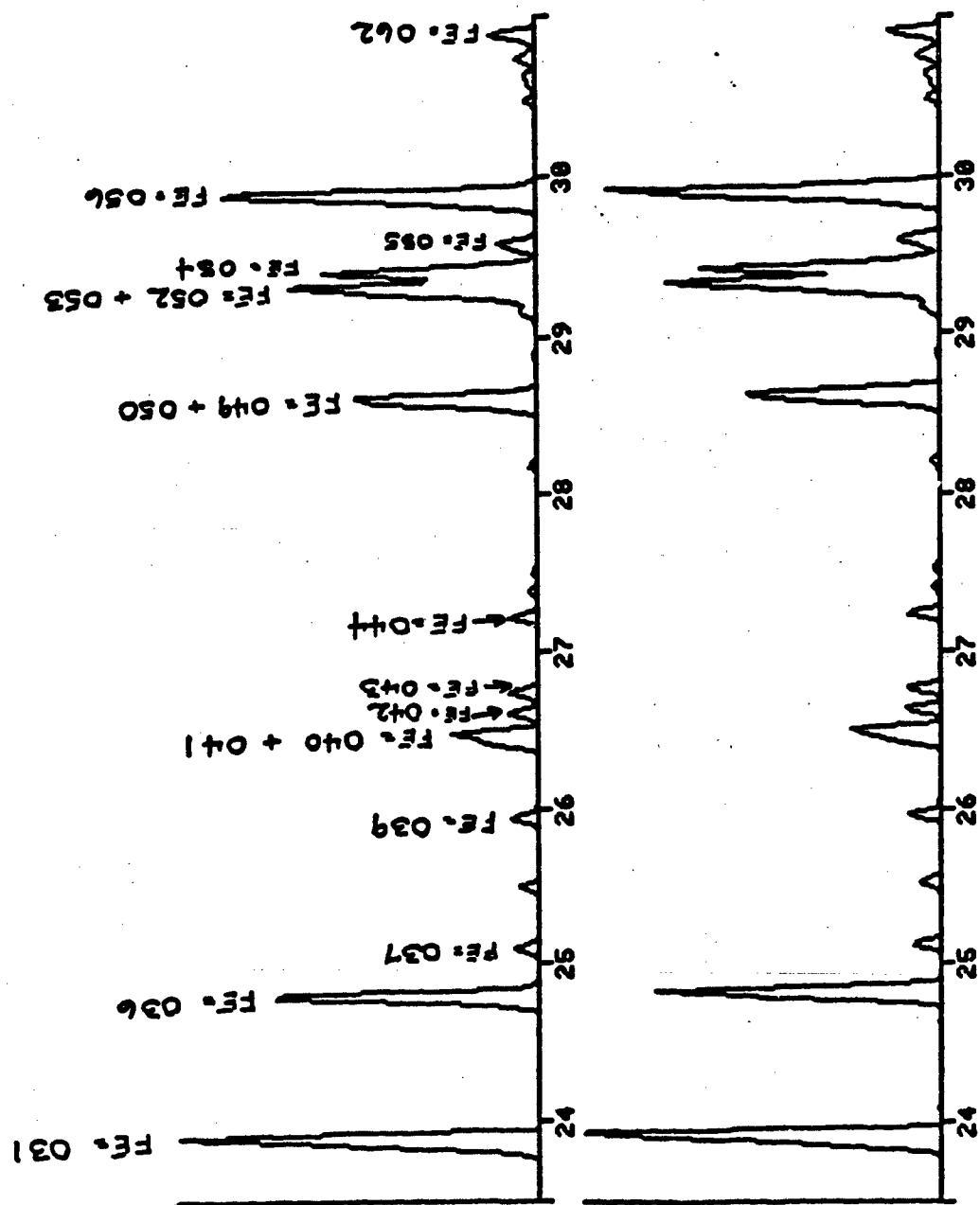


Figure 8 (continued)



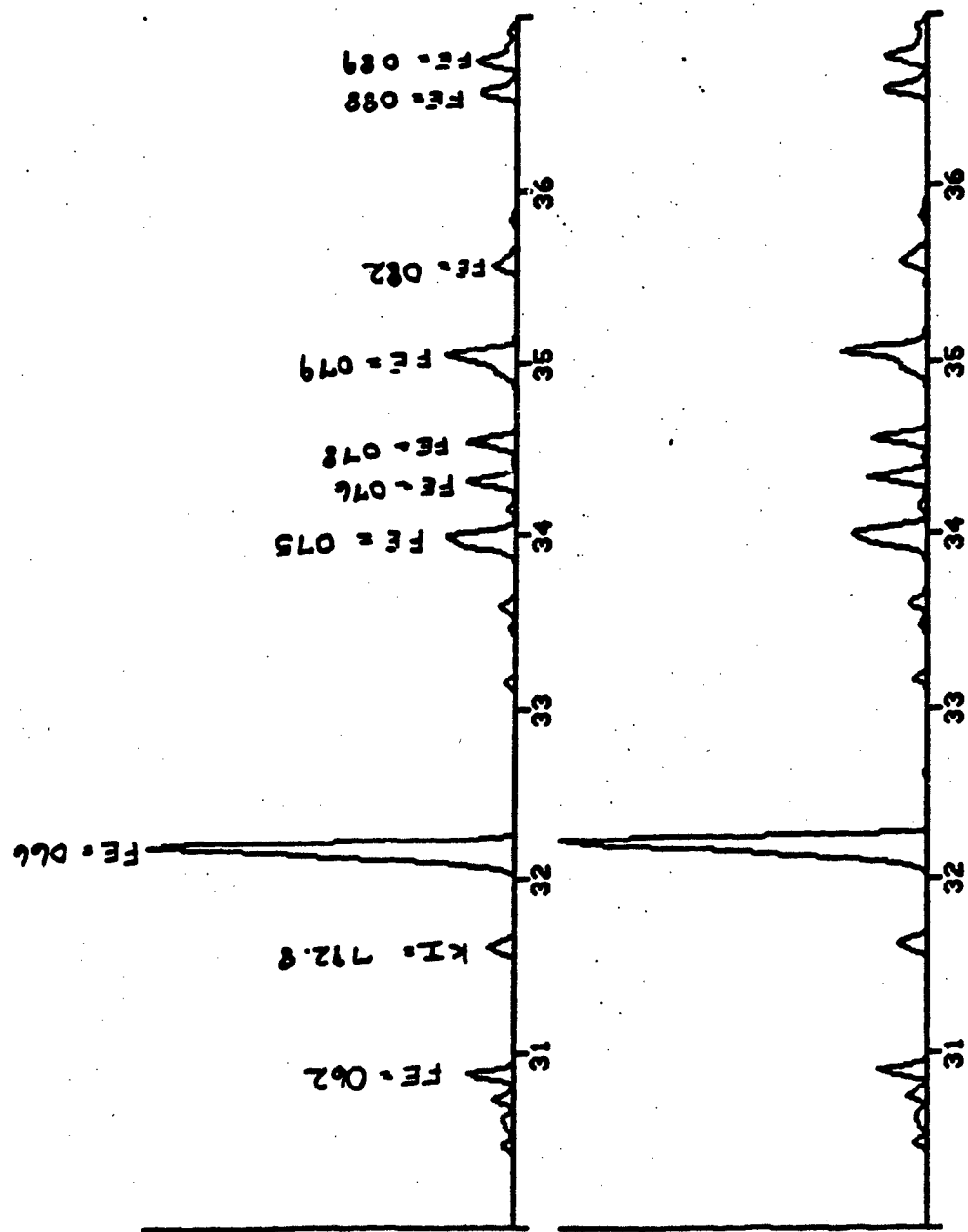


Figure 8 (continued)

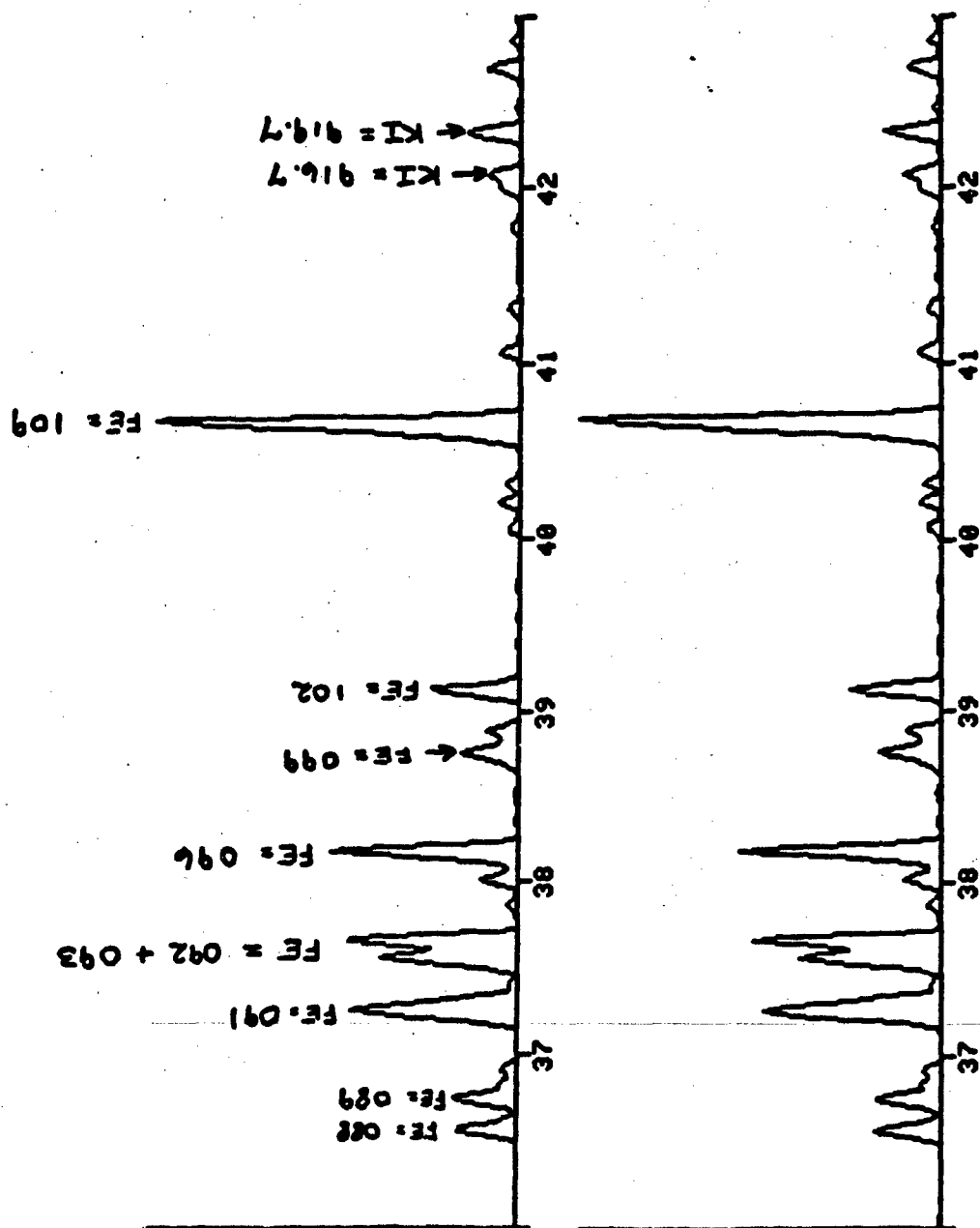


Figure 8 (continued)

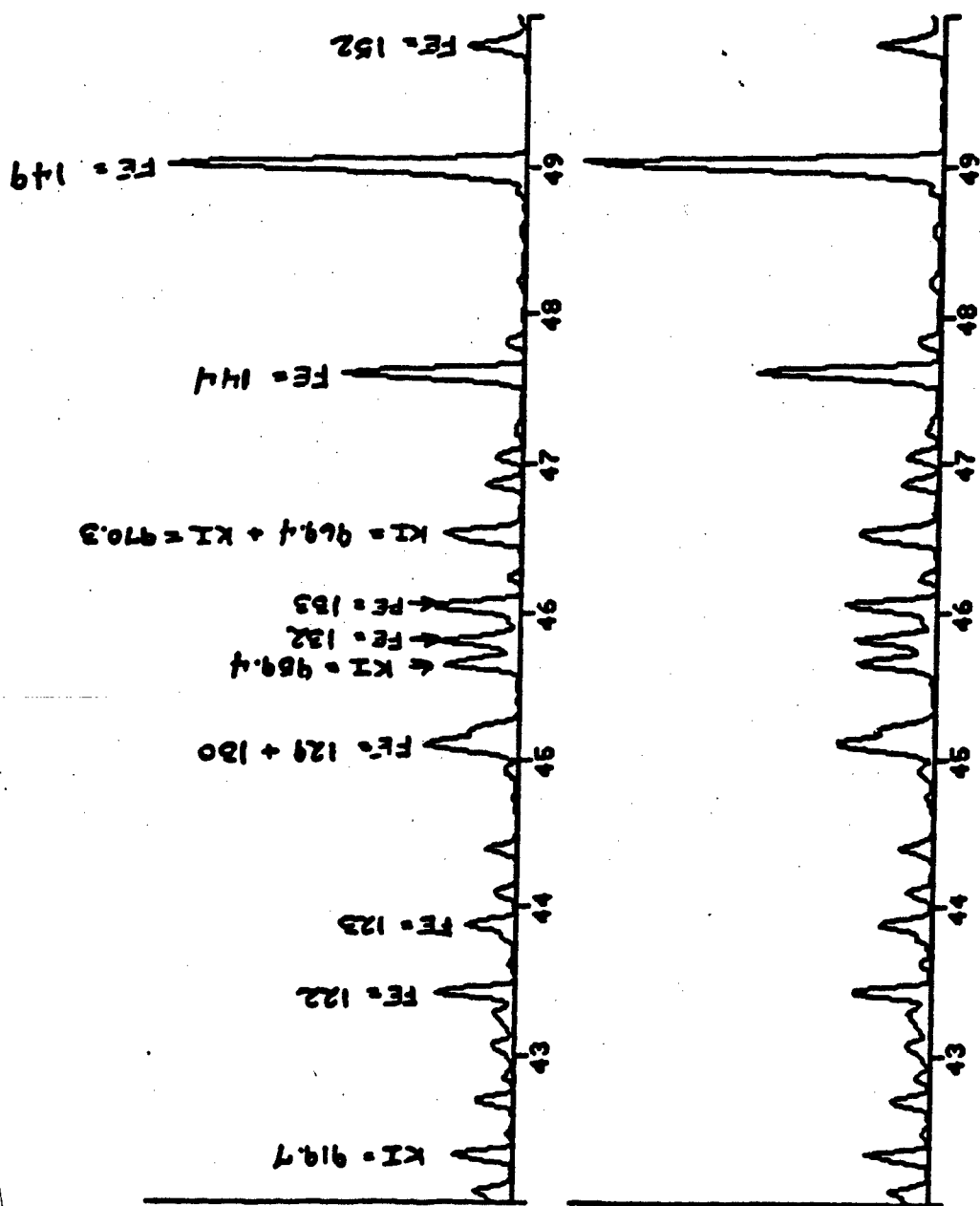


Figure 8 (continued)

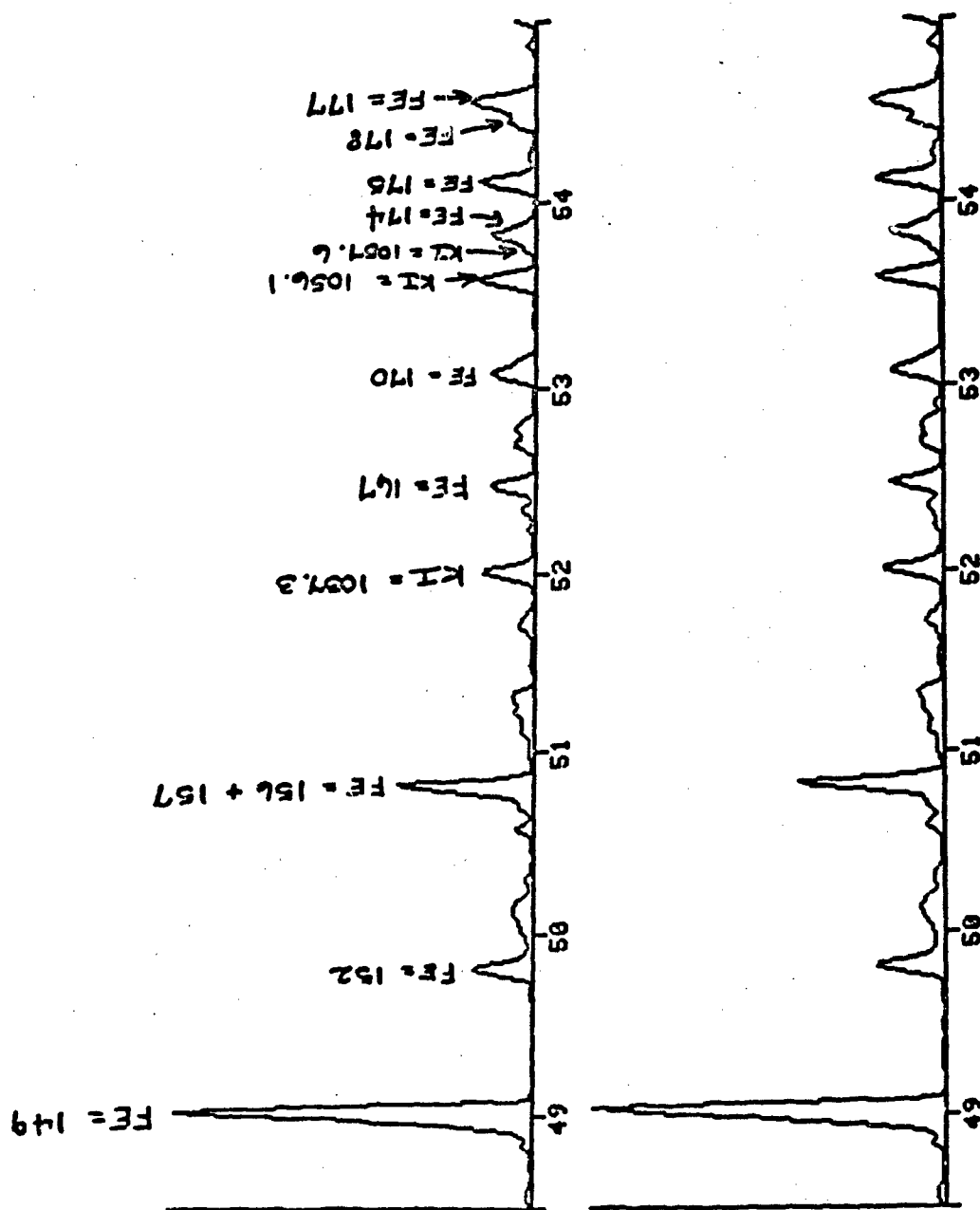


Figure 8 (continued)

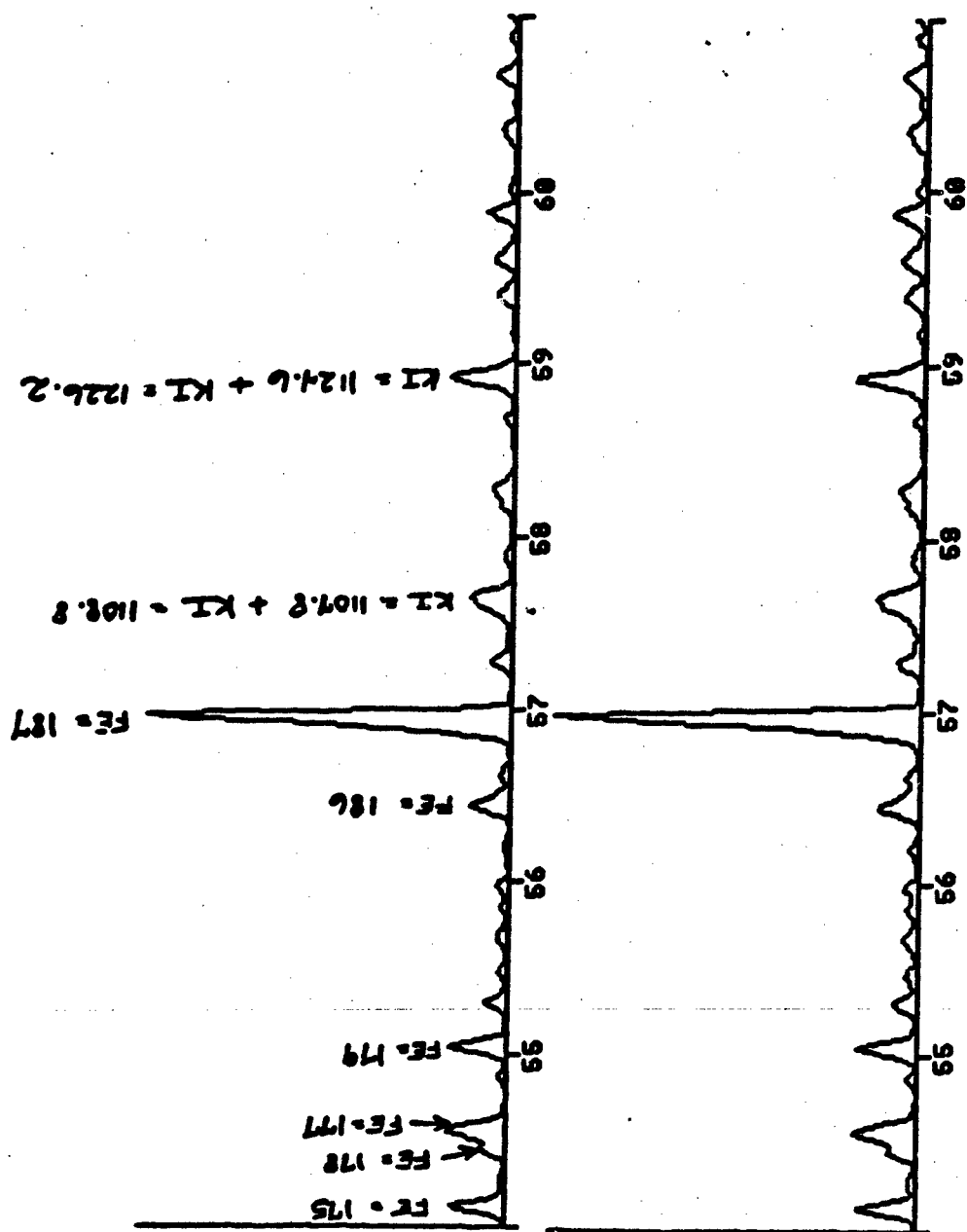


Figure 8 (continued)

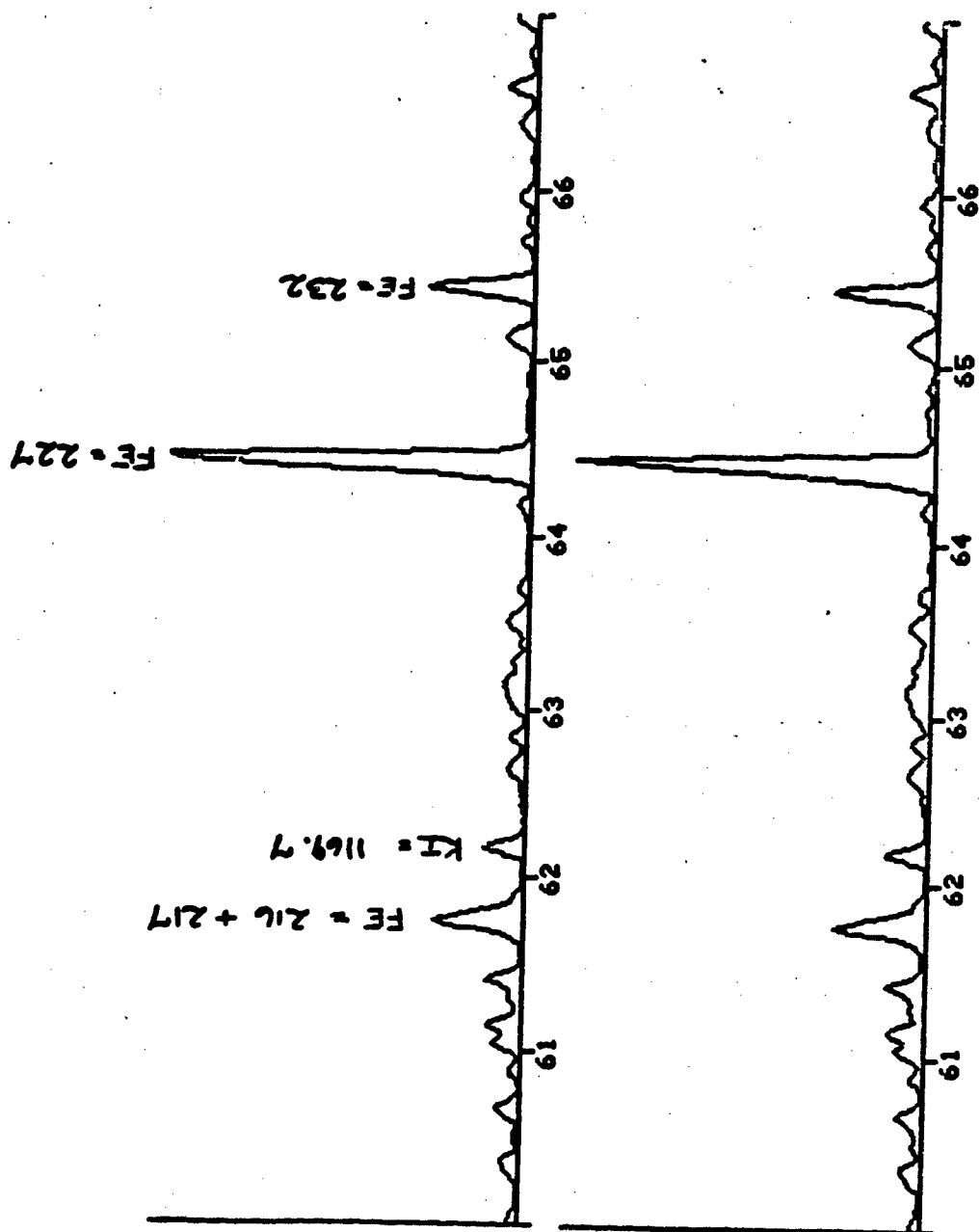
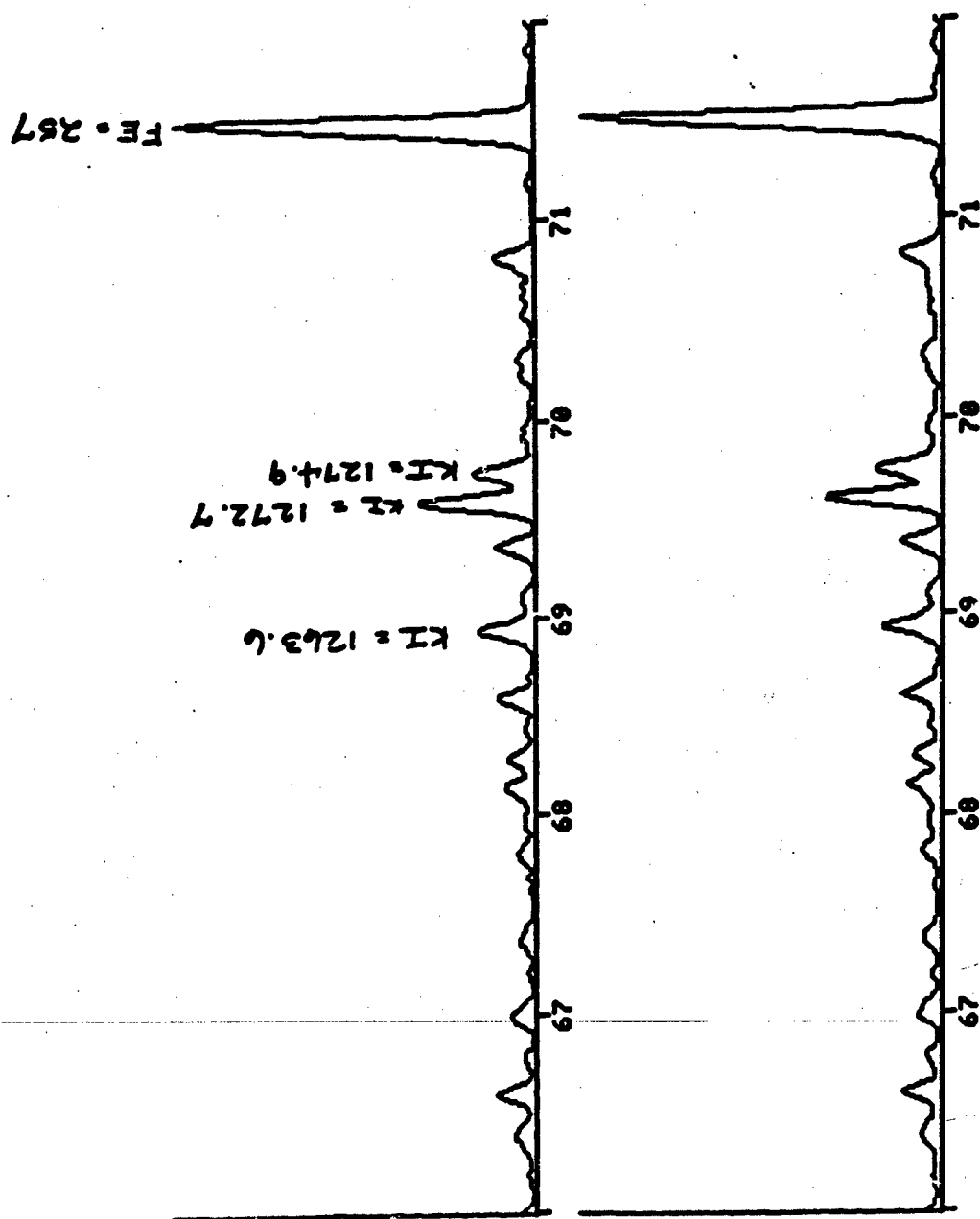


Figure 8 (continued)

Figure 8 (continued)



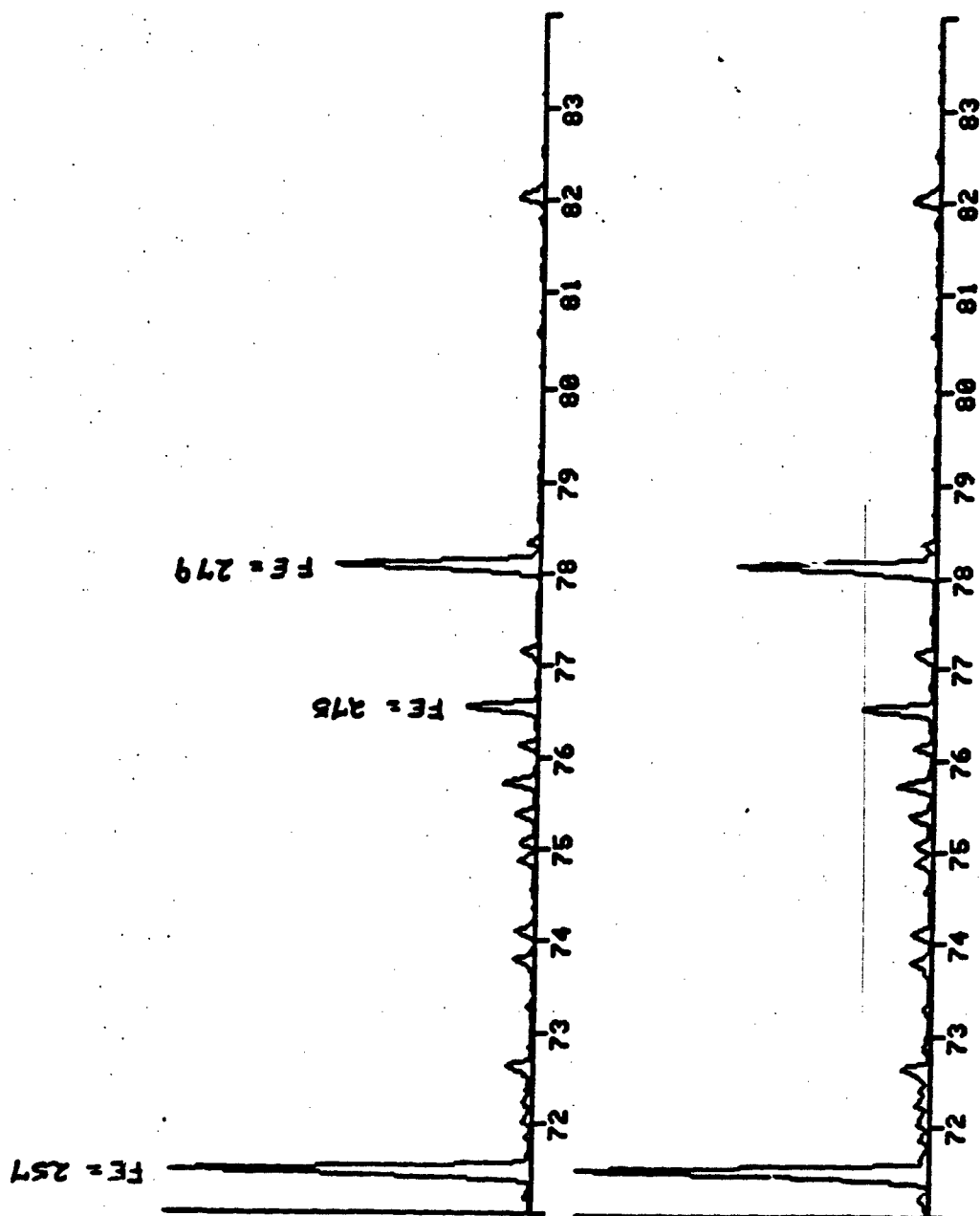


Figure 8 (continued)



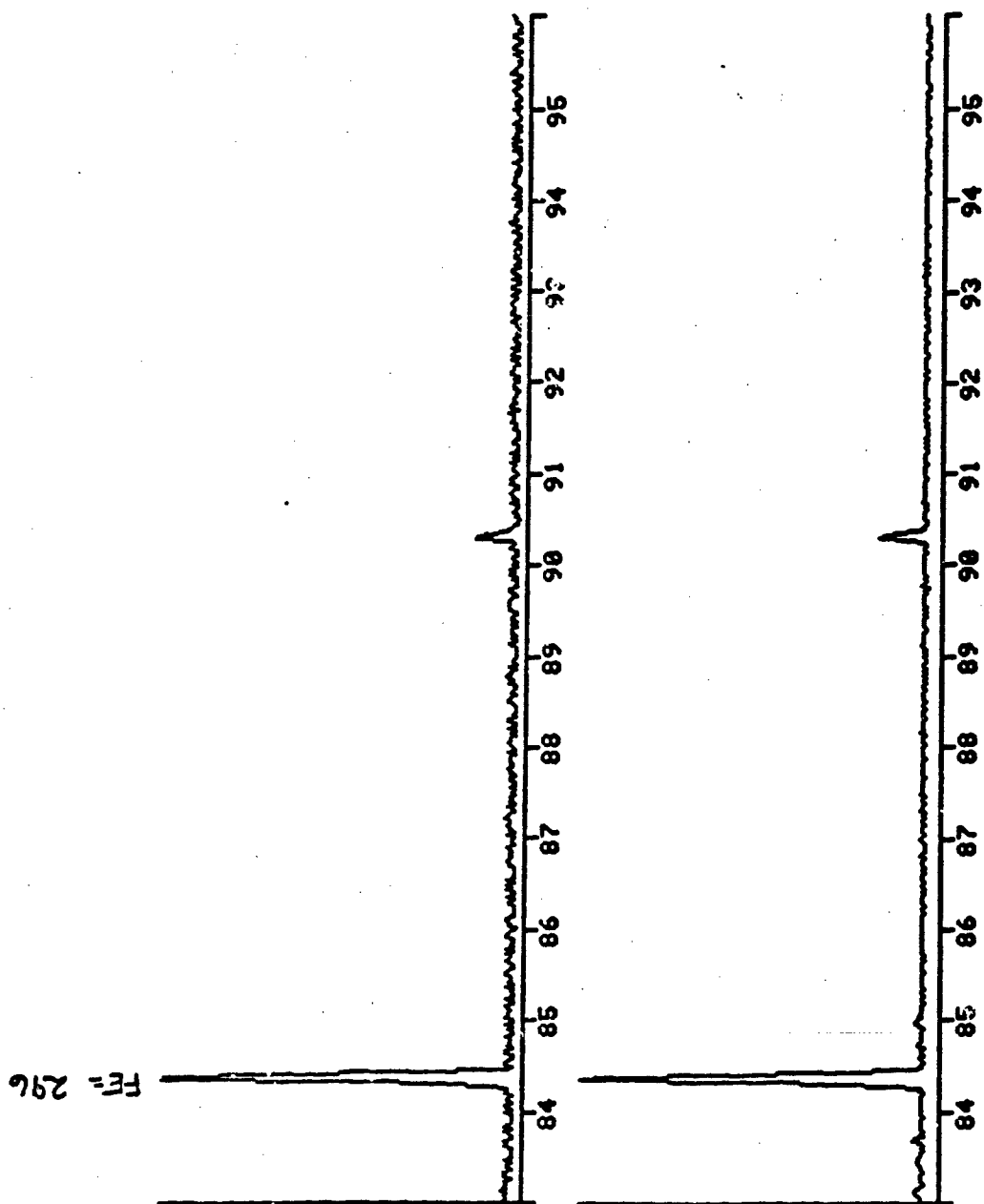


Figure 8 (continued)

Anthracene - d<sub>10</sub> Internal Std.

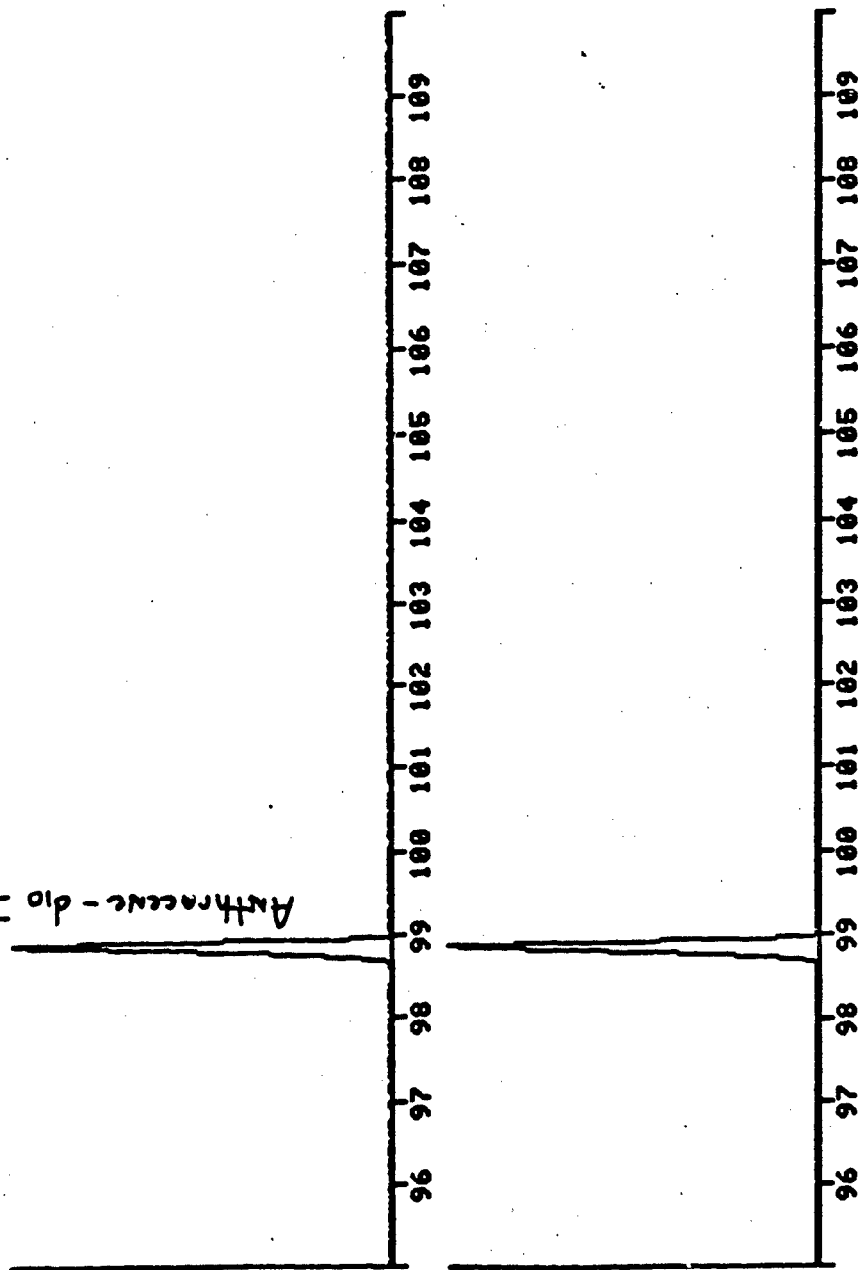


Figure 8 (Concluded)

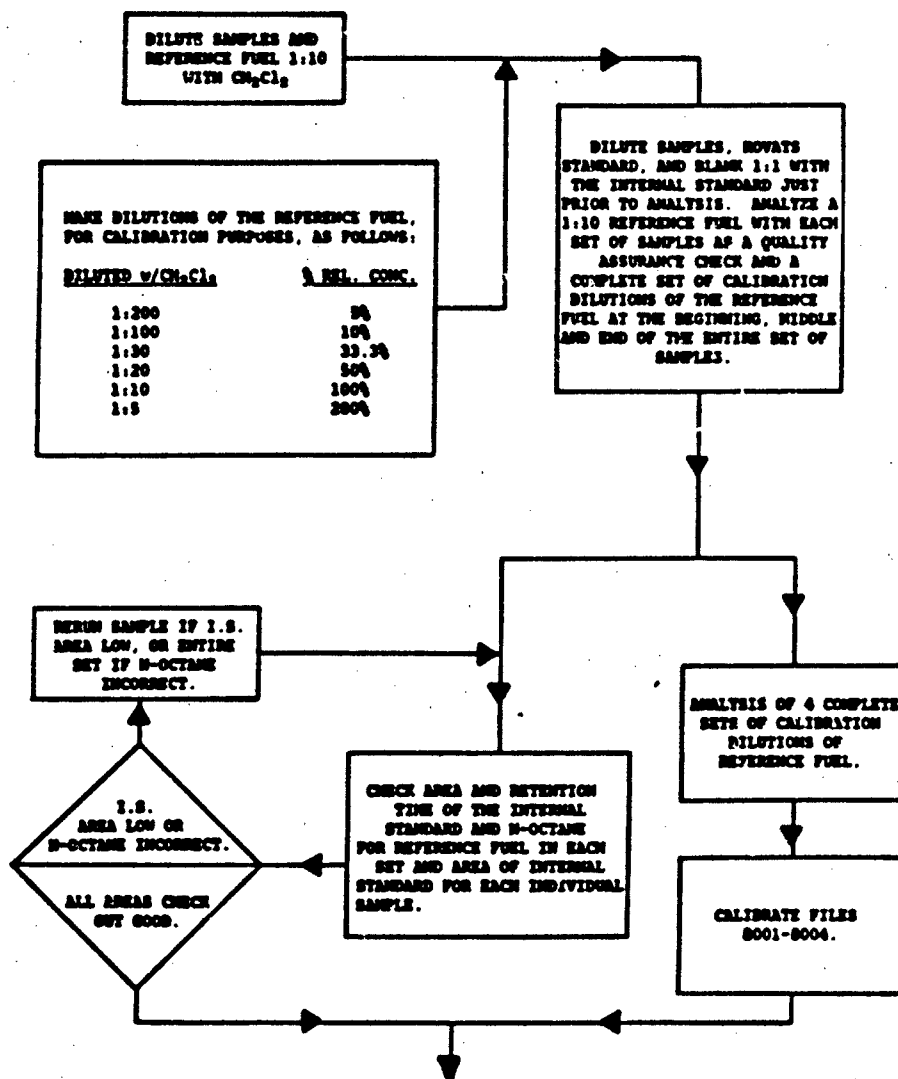


Figure 9. Sample Analysis and Data Reduction Flow Diagram of the GC/MS Analyzed Fuel Samples.

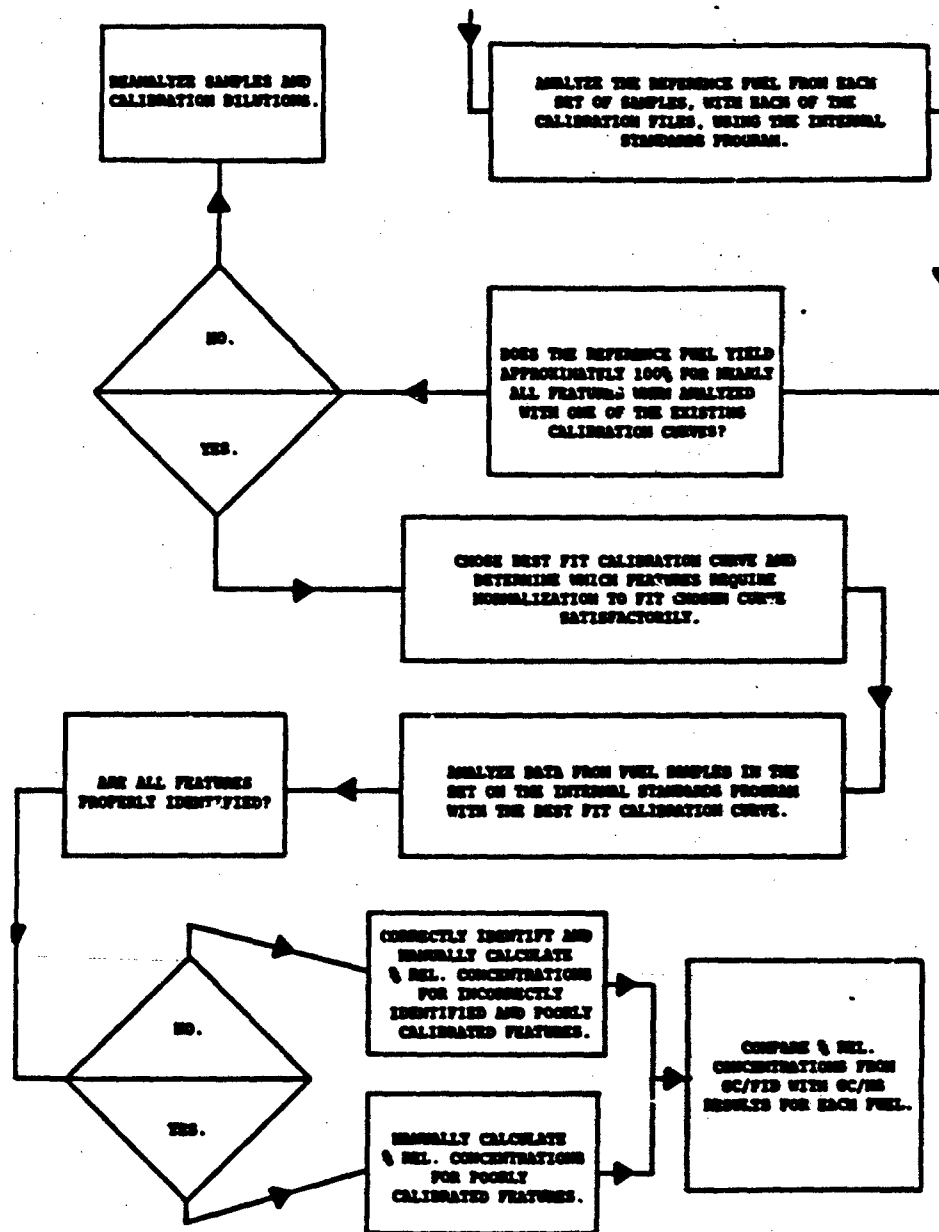
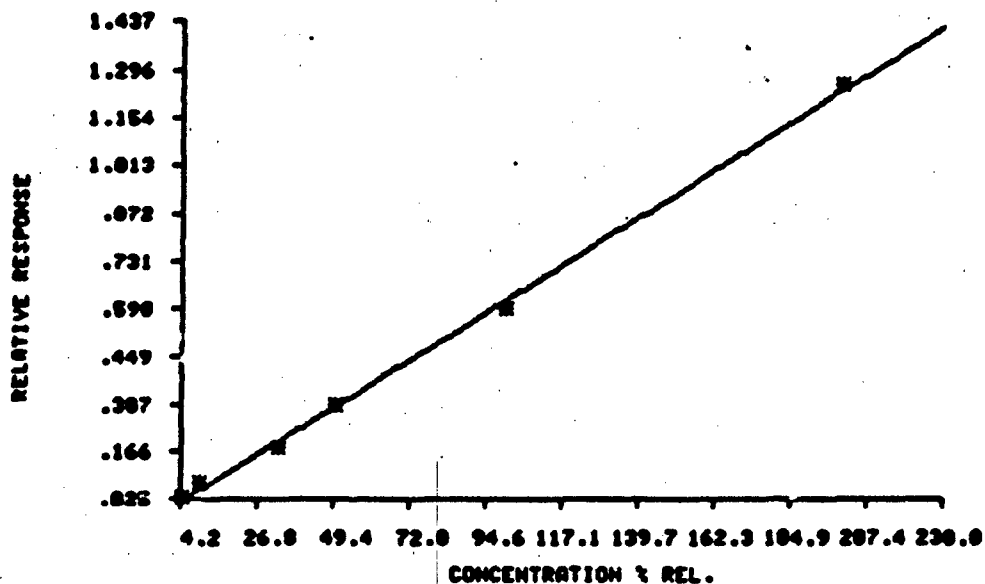


Figure 9 (Concluded)

I.D. NO.: 6 KI= 441.1; F=023( 70, 77)  
 FRM: 0001  $y = .006 x + -.000$   
 Correlation coefficient: 1.00



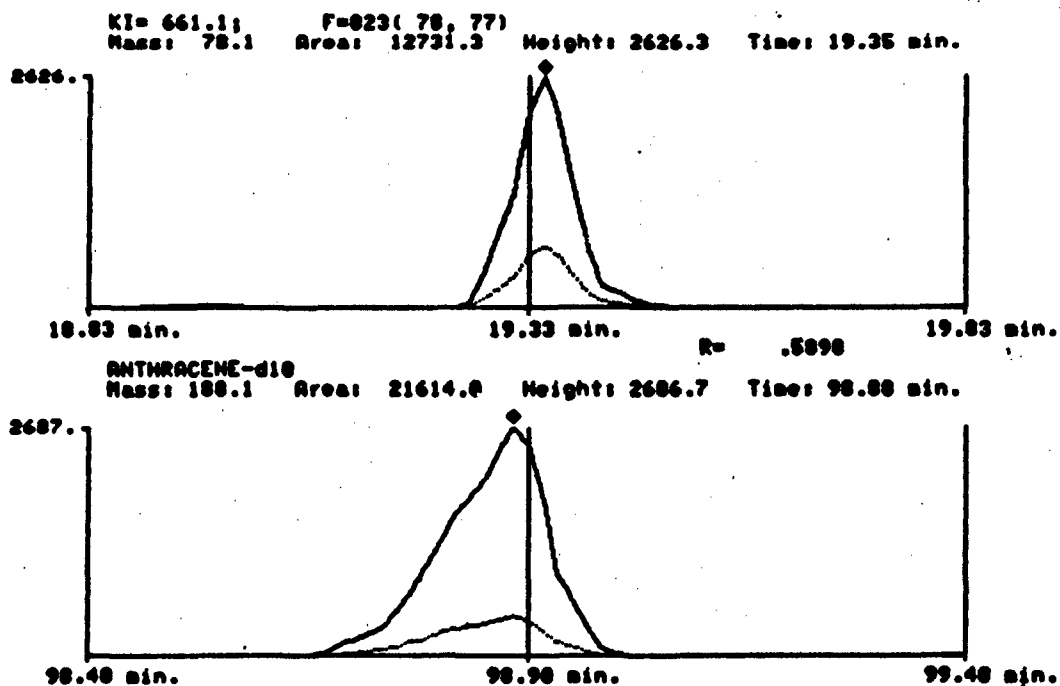
COMPOUND NO. 6: KI= 441.1, F=023( 70, 77)

REPLICATE	CONCENTRATION % REL.					
	3.0	10.0	33.3	50.0	100.0	200.0
1	.0295	.0739	.1794	.3073	.5090	1.2493
2	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000
3	-.0000	-.0000	-.0000	-.0000	-.0000	-.0000

$y = .006 x + -.000$   
 Correlation coefficient= 1.00

Note: -.0 indicates no data.

Figure 10. Example of the Calibration Curve for Feature 023.



I.D. NO.: 6  
 NAME: KI= 661.1; F=023( 78, 77)  
 EXPECTED RETENTION TIME: 19.33 minutes  
 ACTUAL RETENTION TIME: 19.35 minutes  
 PEAK AREA: 12731.3  
 RELATIVE RESPONSE: .58983  
 CONCENTRATION: 96.006 % REL.

Figure 11. Example of the Characteristic Mass Chromatograms Obtained for Feature 023 and the Anthracene-d<sub>10</sub> Internal Standard.

**T A B L E S**

TABLE 1. DESCRIPTION OF THE 5880 CAPILLARY GC/FID  
SYSTEM USED FOR SAMPLE ANALYSIS

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Injection Type: Splitless

Split Liner - ~100 mg 3% OV-101

Septum Purge - Helium @ 6 ml/min.

Split Flow - Helium @ 100 ml/min.

Carrier Gas: Helium

Column Head Pressure - 9 psi

Column Flow Rate - ~1 ml/min.

Column: 30 m x 0.322 mm J&W fused silica capillary with 0.25  $\mu$ M  
DB-5 stationary phase

Injection Column Temperature: -30°C

Initial Column Hold Time: 13 min.

1st Column Temperature Program Rate: 3°C/min to 10°C

2nd Column Temperature Program Rate: 2°C/min to 225°C

3rd Column Temperature Program Rate: 10°C/min to 300°C

Make-up Gas: Helium

Make-up Gas Pressure - 30 psi

Make-up Gas Flow Rate - 25 ml/min.

Hydrogen Gas Pressure: 36 psi

Hydrogen Flow Rate: 30 ml/min.

Air Pressure: 30 psi

Air Flow Rate: 400 ml/min.

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TABLE 2. FIRST PAGE LISTING OF PROCESSED FILE BKP032, BEFORE RUNNING NAMED

PROCESSED DATA FILE: BKP032

SEP 20, 1983 11:28:49

REPORT: 24.13 CHANNEL: 12 # PEAKS: 276 DISTILLATE FUELS

PEAK	RT	ITH	FACTOR	AREA	ms/ml	NAME
1	37.73	0.00	1.10000	711 HH	.135	
2	38.81	0.00	1.10000	2531 HH	.481	
3	40.00	2.61	1.10000	7810 HH	1.466	6400-(KI= 400)M
4	45.75	0.00	1.10000	32826 VV	6.244	
5	50.00	5.65	1.10000	49585 VV	9.432	6500-(KI= 500)M
6	50.70	0.00	1.10000	759 VB	.144	
7	52.03	0.00	1.10000	4221 VV	.803	
8	52.60	8.65	0.00000	19264508 ++	0.000	CH2CL2 SOLVENT
9	54.98	0.00	1.10000	7779 VV	1.480	
10	55.25	0.00	1.10000	9314 VV	1.772	
11	55.88	12.45	1.10000	588 VB	.112	IMPURITY #1-(KI= 558)
12	56.02	0.00	1.10000	54808 ++	10.425	
13	57.75	0.00	1.10000	38688 BV	7.359	
14	60.00	17.22	1.10000	94663 BV	18.006	6400-(KI= 600)M
15	61.11	0.00	1.10000	680 BB	.129	
16	61.39	0.00	1.10000	1053 BB	.200	
17	62.48	0.00	1.10000	50277 VV	9.563	
18	62.72	0.00	1.10000	670 VB	.127	
19	63.24	0.00	1.10000	9706 BV	1.846	
20	65.29	0.00	1.10000	5548 VB	1.055	
21	65.61	0.00	1.10000	47436 BB	9.023	
22	65.88	0.00	1.10000	21233 BB	4.039	
23	66.90	0.00	1.10000	27426 VV	5.217	
24	67.03	0.00	1.10000	67758 VV	12.888	
25	67.44	24.83	1.10000	4442 BV	.845	IMPURITY #2-(KI= 674)
26	67.73	0.00	1.10000	81579 BV	15.517	
27	67.97	0.00	1.10000	14515 VV	2.761	
28	68.20	0.00	1.10000	13912 BV	2.646	
29	68.46	0.00	1.10000	25187 VV	4.791	
30	68.57	0.00	1.10000	7867 VB	1.496	
31	70.00	27.45	1.10000	148363 VV	28.220	6700-(KI= 700)M
32	70.18	0.00	1.10000	777 VB	.148	
33	70.50	0.00	1.10000	662 BV	.126	
34	70.81	0.00	1.10000	1025 VB	.195	
35	71.25	0.00	1.10000	93815 BV	17.845	
36	71.56	0.00	1.10000	8420 VV	1.602	
37	71.91	0.00	1.10000	6098 BB	1.160	
38	72.58	0.00	1.10000	9452 BB	1.798	
39	73.00	0.00	1.10000	14116 BV	2.685	
40	73.10	0.00	1.10000	23876 VV	4.541	
41	73.36	0.00	1.10000	9498 VV	1.807	
42	73.51	0.00	1.10000	8573 VB	1.631	
43	74.12	0.00	1.10000	9170 BV	1.744	
44	74.33	0.00	1.10000	2930 VV	.557	
45	74.54	0.00	1.10000	2712 VB	.516	
46	74.99	0.00	1.10000	769 BB	.146	
47	75.39	0.00	1.10000	3509 BV	.667	
48	75.71	0.00	1.10000	25090 VV	4.772	
49	75.88	0.00	1.10000	49531 VV	9.421	
50	76.20	0.00	1.10000	1764 VB	.336	
51	76.53	0.00	1.10000	104772 BV	19.929	
52	76.64	0.00	1.10000	40998 VV	7.798	

TABLE 3. FIRST PAGE LISTING OF PROCESSED FILE BKP032, AFTER RUNNING Namer

PROCESSED DATA FILE: BKP032

SEP 20, 1983 11:31:32

REPORT: 24.13 CHANNEL: 12 # PEAKS: 276 DISTILLATE FUELS

PEAK	RT	ITH	FACTOR	AREA	ms/ml	NAME
1	37.73	37.70	1.10000	711 HH	.135	Unk (KI= 377)P
2	38.81	38.80	1.10000	2531 HH	.481	Unk (KI= 388)P
3	40.00	40.00	1.10000	7810 HH	1.486	\$400-(KI= 400)M
4	45.75	45.70	1.10000	32826 VV	6.244	Unk (KI= 457)P
5	50.00	50.00	1.10000	49585 VV	9.432	\$500-(KI= 500)M
6	50.70	50.70	1.10000	759 VB	.144	Unk (KI= 507)P
7	52.03	52.00	1.10000	4221 VV	.803	Unk (KI= 520)P
8	52.60	52.60	0.00000	19264508 ++	0.000	CH2CL2 SOLVENT
9	54.98	55.00	1.10000	7779 VV	1.480	Unk (KI= 550)P
10	55.25	55.30	1.10000	9314 VV	1.772	Unk (KI= 553)P
11	55.88	55.90	1.10000	588 VB	.112	IMPURITY #1-(KI= 558)
12	56.02	56.00	1.10000	54808 ++	10.425	Unk (KI= 560)P
13	57.75	57.70	1.10000	38668 BV	7.359	Unk (KI= 577)P
14	60.00	60.00	1.10000	94663 BV	18.006	\$600-(KI= 600)M
15	61.11	61.10	1.10000	680 BB	.129	Unk (KI= 611)P
16	61.39	61.40	1.10000	1053 BB	.200	Unk (KI= 614)P
17	62.48	62.50	1.10000	50277 VV	9.563	Unk (KI= 625)P
18	62.72	62.70	1.10000	670 VB	.127	Unk (KI= 627)P
19	63.24	63.20	1.10000	9706 BV	1.846	Unk (KI= 632)P
20	65.29	65.30	1.10000	5548 VB	1.055	Unk (KI= 653)P
21	65.61	65.60	1.10000	47436 BB	9.023	Unk (KI= 656)P
22	65.88	65.90	1.10000	21233 BB	4.039	Unk (KI= 659)P
23	66.90	66.90	1.10000	27426 VV	5.217	Unk (KI= 669)P
24	67.03	67.00	1.10000	67758 VV	12.888	Unk (KI= 670)P
25	67.44	67.40	1.10000	4442 BV	.845	IMPURITY #2-(KI= 674)
26	67.73	67.70	1.10000	81579 BV	15.517	Unk (KI= 677)P
27	67.97	68.00	1.10000	14515 VV	2.761	Unk (KI= 680)P
28	68.20	68.20	1.10000	13912 BV	2.646	Unk (KI= 682)P
29	68.46	68.50	1.10000	25187 VV	4.791	Unk (KI= 685)P
30	68.57	68.60	1.10000	7867 VB	1.496	Unk (KI= 686)P
31	70.00	70.00	1.10000	148363 VV	28.220	\$700-(KI= 700)M
32	70.18	70.20	1.10000	777 VB	.148	Unk (KI= 702)P
33	70.50	70.50	1.10000	662 BV	.126	Unk (KI= 705)P
34	70.81	70.80	1.10000	1025 VB	.195	Unk (KI= 708)P
35	71.25	71.30	1.10000	93815 BV	17.845	Unk (KI= 713)P
36	71.56	71.60	1.10000	8420 VV	1.602	Unk (KI= 716)P
37	71.91	71.90	1.10000	6098 BB	1.160	Unk (KI= 719)P
38	72.58	72.60	1.10000	9452 BB	1.798	Unk (KI= 726)P
39	73.00	73.00	1.10000	14116 BV	2.685	Unk (KI= 730)P
40	73.10	73.10	1.10000	23876 VV	4.541	Unk (KI= 731)P
41	73.36	73.40	1.10000	9498 VV	1.807	Unk (KI= 734)P
42	73.51	73.50	1.10000	8573 VB	1.631	Unk (KI= 735)P
43	74.12	74.10	1.10000	9170 BV	1.744	Unk (KI= 741)P
44	74.33	74.30	1.10000	2930 VV	.557	Unk (KI= 743)P
45	74.54	74.50	1.10000	2712 VB	.516	Unk (KI= 745)P
46	74.99	75.00	1.10000	769 BB	.146	Unk (KI= 750)P
47	75.39	75.40	1.10000	3509 BV	.667	Unk (KI= 754)P
48	75.71	75.70	1.10000	25090 VV	4.772	Unk (KI= 757)P
49	75.88	75.90	1.10000	49531 VV	9.421	Unk (KI= 759)P
50	76.20	76.20	1.10000	1764 VB	.336	Unk (KI= 762)P
51	76.53	76.50	1.10000	104772 BV	19.929	Unk (KI= 765)P
52	76.64	76.60	1.10000	40998 VV	7.798	Unk (KI= 766)P

TABLE 4. EXAMPLE OF REPS DATA BASE MANAGEMENT PROGRAM OUTPUT  
FOR DATA BASE CONTAINING FOUR REPLICATE ANALYSES

CONCENTRATIONS OF NAMED COMPOUNDS IN SAMPLES IN DATA BASE MH11 NUMBER OF SAMPLES= 4					
		SAMPLE NAME			
COMPOUND NAME		607JP4ME 01B	607JP4ME 01	607JP4ME 02	607JP4ME 02B
		(mg/ml)	(mg/ml)	(mg/ml)	(mg/ml)
PROCESSED FILE		BKP033	BKP032	BKP034	BKP035
KI= 377.21	FE=001	.1138	.1230	.1217	.1009
KI= 388.01	FE=002	.4193	.4377	.3995	.3888
8400-n-C4-ANE:	FE=003	1.2804	1.3505	1.2517	1.1980
KI= 457.61	FE=004	5.4848	5.6763	5.3491	5.2462
8500-n-C5-ANE:	FE=005	8.2773	8.5743	8.1593	7.9512
KI= 507.01	FE=006	0.0000	.1313	0.0000	0.0000
KI= 514.31	FE=008	0.0000	0.0000	.1016	.0981
KI= 520.11	FE=009	.7049	.7299	.6977	.6978
CH2CL2 SOLVENT		0.0000	0.0000	0.0000	0.0000
KI= 549.71	FE=010	1.3027	1.3452	1.2901	1.2517
KI= 552.41	FE=011	1.5929	1.6106	1.5486	1.5172
IMPURITY #1(KI= 558.6)		.2030	.1016	.1135	.2037
KI= 560.41	FE=012	9.5054	9.4773	9.1056	9.1567
KI= 577.31	FE=013	6.5750	6.6899	6.4219	6.3299
8600-n-C6-ANE:	FE=014	16.0060	16.3690	15.7577	15.4873
KI= 609.21	FE=015	0.0000	0.0000	.0983	0.0000
KI= 611.21	FE=016	.1141	.1176	.1022	.1085
KI= 613.91	FE=017	.1893	.1821	.1793	.1599
KI= 624.81	FE=018	8.4992	8.6938	8.3609	8.2481
KI= 627.31	FE=019	.0946	.1158	0.0000	.1109
KI= 632.41	FE=020	1.6648	1.6783	1.6248	1.5894
KI= 653.01	FE=021	.9493	.9593	.9513	.9076
KI= 656.11	FE=022	8.0508	8.2025	7.8992	7.7940
KI= 658.81	FE=023	3.6210	3.6716	3.5612	3.5317
KI= 669.01	FE=024	4.7154	4.7425	4.5943	4.5843
KI= 670.41	FE=025	11.4943	11.7166	11.3023	11.1237
IMPURITY #2(KI= 674.4)		.7484	.7681	.7494	.7342
KI= 677.41	FE=026	13.8640	14.1066	13.6134	13.4465
KI= 679.81	FE=027	2.4609	2.5100	2.4218	2.4031
KI= 682.01	FE=028	2.3611	2.4057	2.3199	2.2974
KI= 684.61	FE=029	4.2844	4.3534	4.2065	4.1683
KI= 685.81	FE=030	1.3388	1.3604	1.3095	1.2931
8700-n-C7-ANE:	FE=031	25.2581	25.6548	24.7840	24.5171
KI= 701.81	FE=032	0.0000	.1343	0.0000	.1285
KI= 705.01	FE=033	.1130	.1144	.1118	.1099
KI= 706.71	FE=034	.0875	0.0000	.0918	0.0000
KI= 708.01	FE=035	.1850	.1773	.1802	.1751
KI= 712.51	FE=036	15.9903	16.2225	15.6810	15.5235
KI= 715.61	FE=037	1.4565	1.4560	1.4218	1.3955
KI= 719.11	FE=038	1.0502	1.0545	1.0203	1.0302
KI= 725.81	FE=039	1.6326	1.6344	1.5771	1.5932
KI= 730.01	FE=040	2.4132	2.4409	2.3586	2.3338
KI= 731.01	FE=041	4.0787	4.1286	3.9687	3.9707
KI= 733.61	FE=042	1.6217	1.6424	1.5799	1.5735
KI= 735.01	FE=043	1.4662	1.4924	1.4318	1.4191
KI= 741.21	FE=044	1.5478	1.5856	1.5309	1.5148
KI= 743.31	FE=045	.4711	.5067	.4911	.4868

TABLE 4 (continued)

KI= 745.41	FE=046	.3578	.4690	.4586	.4474
KI= 749.91	FE=047	.1345	.1329	.1273	.1287
KI= 753.91	FE=048	.6118	.6068	.5898	.5819
KI= 757.11	FE=049	4.2969	4.3385	4.2047	4.1726
KI= 758.81	FE=050	8.4954	8.5648	8.3180	8.2841
KI= 762.01	FE=051	.3056	.3051	.2911	.2894
KI= 765.31	FE=052	17.9096	18.1171	17.5597	17.4011
KI= 766.41	FE=053	7.0226	7.0694	6.8592	6.8405
KI= 768.81	FE=054	4.6688	4.7109	4.5664	4.5344
KI= 770.61	FE=055	2.5128	2.5455	2.4659	2.4497
KI= 772.41	FE=056	20.3474	20.5673	19.9317	19.7872
KI= 775.21	FE=057	.8439	.8454	.8218	.8125
KI= 781.01	FE=058	1.1334	1.1581	1.1158	1.1074
KI= 783.21	FE=059	.6908	.7044	.6808	.6855
KI= 784.41	FE=060	1.2472	1.2783	1.3817	1.2217
KI= 785.41	FE=061	.1320	.1606	0.0000	.1464
KI= 786.91	FE=062	2.5206	2.6399	2.5435	2.5064
KI= 791.11	FE=063	.0947	.0900	.0911	.0944
KI= 794.41	FE=064	.6436	.6342	.5971	.6324
KI= 795.71	FE=065	1.5184	1.4730	1.3893	1.4873
8800-n-C8-ANE1	FE=066	27.0799	27.3445	26.4261	26.3647
KI= 802.51	FE=067	.1186	.0944	.0970	.1115
KI= 805.71	FE=068	.1289	.1394	0.0000	.1310
KI= 807.11	FE=069	.2659	.2534	.1942	.2436
KI= 808.91	FE=070	.1085	.0875	0.0000	.0888
KI= 812.31	FE=071	.5864	.5776	.5511	.5662
KI= 813.61	FE=072	.2758	.2784	.2898	.2746
KI= 817.01	FE=073	.9053	.9220	.8973	.8936
KI= 818.21	FE=074	.8255	.8355	.8332	.8024
KI= 821.31	FE=075	2.2114	2.2684	2.2373	2.2009
KI= 824.21	FE=076	3.9191	3.9125	3.8414	3.7897
KI= 825.71	FE=077	1.0984	1.1026	1.1057	1.0710
KI= 828.11	FE=078	5.7715	5.6778	5.6840	5.5077
KI= 834.41	FE=079	6.3455	6.3752	6.2305	6.1626
KI= 837.01	FE=080	.2452	.2506	.2485	.2481
KI= 840.81	FE=081	.2164	.2214	.2129	.2084
KI= 842.71	FE=082	2.0662	2.0834	2.0319	2.0100
KI= 844.21	FE=083	.5996	.5973	.5740	.5837
KI= 846.21	FE=084	.2504	.2522	.2459	.2532
KI= 848.21	FE=085	.1347	.1329	.1174	.1350
KI= 850.91	FE=086	0.0000	0.0000	0.0000	.0919
KI= 852.81	FE=087	.1772	.1781	.1678	.1694
KI= 854.41	FE=088	4.6062	4.6251	4.4930	4.4947
KI= 856.11	FE=089	1.7620	1.7593	1.7247	1.7144
KI= 860.01	FE=090	1.1142	1.1089	1.0877	1.0824
KI= 862.21	FE=091	8.1681	8.2807	8.0536	8.0210
KI= 863.81	FE=092	5.5860	5.5204	5.4061	5.4053
KI= 865.01	FE=093	6.4122	6.4394	6.2943	6.2584
KI= 867.41	FE=094	.3787	.3274	.3472	.3325
KI= 869.51	FE=095	1.4683	1.4483	1.4224	1.4258
KI= 871.21	FE=096	7.2222	7.2338	7.0816	7.0220
KI= 873.11	FE=097	.3838	.3110	.3717	.3247
KI= 877.11	FE=098	.4085	.4229	.4018	.4078
KI= 880.01	FE=099	2.8788	2.9081	2.8394	2.8311
KI= 881.61	FE=100	1.1196	1.1442	1.0971	1.1169
KI= 884.51	FE=102	3.6435	3.5836	3.5999	3.5913
KI= 887.41	FE=103	.2912	.3337	.3121	.3335
KI= 890.91	FE=104	.2637	.2993	.3013	.2927
KI= 892.61	FE=105	.1522	.1760	.1719	.1600
KI= 894.61	FE=106	.4291	.4420	.4456	.4402
KI= 895.91	FE=107	.4161	.4297	.4251	.4114

TABLE 4 (continued)

KI= 897.6:	FE=108	.8166	.8321	.8347	.8078
9900-n-C9-ANE:	FE=109	16.0896	16.3727	15.9615	15.7466
KI= 901.3:	FE=110	.1645	0.0000	0.0000	.1598
KI= 908.4:	FE=112	1.1290	1.1422	1.2282	1.1254
KI= 910.8:	FE=113	.6447	.6451	.8634	.6565
KI= 913.9:	FE=114	.3569	.3745	.5129	.3526
KI= 915.4:	FE=115	.2858	.2848	.4000	.2800
KI= 917.7:	FE=116	1.6061	1.6189	1.7494	1.5810
KI= 920.1:	FE=117	.4455	.4503	.5331	.4459
KI= 922.6:	FE=118	2.1305	2.1520	2.1586	2.1047
KI= 924.7:	FE=119	1.1939	1.1863	1.1862	1.1686
KI= 929.1:	FE=120	1.7888	1.7920	1.6866	1.6867
KI= 933.5:	FE=122	3.7940	3.9524	3.3211	3.3027
KI= 939.4:	FE=123	2.9825	2.9999	2.2935	2.9029
KI= 945.3:	FE=125	1.3913	1.4042	1.2665	1.3635
KI= 947.4:	FE=126	1.2726	1.2701	1.1974	1.2418
KI= 952.0:	FE=127	.8048	.8068	.8140	.7950
KI= 953.5:	FE=128	1.4428	1.4544	1.4708	1.4140
KI= 955.8:	FE=129	4.0019	3.9786	4.0316	3.8797
KI= 956.8:	FE=130	1.3256	1.3736	1.4519	1.3320
KI= 960.5:	FE=131	.7865	.7989	.9568	.7711
KI= 962.1:	FE=132	4.2956	4.3102	4.7277	4.2112
KI= 964.7:	FE=133	2.0669	2.0680	2.7546	2.0248
KI= 966.1:	FE=134	0.0000	0.0000	.3420	0.0000
KI= 967.4:	FE=135	.4614	.4738	1.2120	.4686
KI= 970.8:	FE=136	2.2614	2.2725	2.3227	2.2102
KI= 972.7:	FE=137	1.4974	1.5060	1.5652	1.4598
KI= 974.9:	FE=138	.0763	.1003	.1489	.0901
KI= 976.9:	FE=139	1.4182	1.4275	1.4821	1.3820
KI= 979.2:	FE=140	1.2865	1.2953	1.3442	1.2530
KI= 981.7:	FE=142	.5038	.5113	.5416	.4880
KI= 983.3:	FE=143	.2009	.2040	.2470	.1910
KI= 986.2:	FE=144	7.0537	7.0915	7.0028	6.9228
KI= 989.0:	FE=145	.8017	.8084	.8440	.7725
KI= 993.5:	FE=146	.9176	.9258	.9745	.8967
KI= 995.3:	FE=147	.2805	.2732	.2770	.2692
KI= 996.8:	FE=148	.2278	.2409	.2505	.2376
91000-n-C10-ANE:	FE=149	12.9895	12.0426	12.7851	12.7250
KI=1003.9:	FE=150	.6865	.6908	.6817	.6741
KI=1009.0:	FE=151	.1021	.1080	0.0000	0.0000
KI=1013.9:	FE=152	3.4825	3.4941	3.5559	3.5572
KI=1017.0:	FE=153	1.2824	1.2798	1.3127	1.3343
KI=1020.1:	FE=155	1.0237	1.0232	1.0582	1.0405
KI=1022.9:	FE=156	2.9078	2.9091	2.8641	2.8604
KI=1025.8:	FE=157	2.1098	2.1100	2.0727	2.0680
KI=1028.4:	FE=158	1.4328	1.3440	1.3068	1.3111
KI=1031.6:	FE=159	.9167	.8357	.8169	.8236
KI=1033.4:	FE=160	.3609	.3036	.2931	.2982
KI=1034.6:	FE=161	.7759	.6727	.6621	.6564
KI=1036.6:	FE=162	.3682	.2602	.2552	.2577
KI=1038.5:	FE=163	.8428	.6772	.6614	.6673
KI=1040.6:	FE=164	.2322	.0941	.0908	.0935
KI=1043.2:	FE=165	1.4524	1.1735	1.1532	1.1616
KI=1044.7:	FE=166	.5631	.4201	.4045	.4038
KI=1046.4:	FE=167	2.2688	1.8681	1.8284	1.8311
KI=1049.4:	FE=168	.8674	.6479	.6237	.6216
KI=1050.6:	FE=169	1.4715	1.0148	1.0050	1.0053
KI=1053.8:	FE=170	2.2614	1.3533	1.3192	1.3240
KI=1057.9:	FE=173	1.5506	1.1783	1.1500	1.1509
KI=1060.8:	FE=174	2.1869	2.0502	2.0063	2.0091
KI=1064.6:	FE=175	2.4630	2.4726	2.4242	2.4082

TABLE 4 (continued)

KI=1066.2:	FE=176	.6093	.6048	.5932	.5995
KI=1070.6:	FE=177	3.2235	3.2179	3.1747	3.1515
KI=1072.8:	FE=178	1.7950	1.8026	1.7575	1.7515
KI=1079.0:	FE=179	3.0857	3.0772	3.0265	3.0047
KI=1081.6:	FE=180	.8208	.8142	.8067	.7960
KI=1084.3:	FE=181	.9605	.9427	.9506	.9299
KI=1087.2:	FE=182	.5944	.5824	.5826	.5637
KI=1089.4:	FE=183	.4586	.4550	.4469	.4362
KI=1090.8:	FE=184	.5073	.4824	.4983	.4802
KI=1093.8:	FE=185	.2491	.2301	.2441	.2220
KI=1096.0:	FE=186	.9178	.8970	.8948	.8667
\$1100-n-C11-ANE:	FE=187	15.5146	15.3442	15.0628	15.0290
KI=1101.7:	FE=188	0.0000	.1901	.1931	.1786
KI=1104.4:	FE=189	.4838	.4557	.4750	.4447
KI=1106.6:	FE=190	.0989	0.0000	.0955	0.0000
KI=1108.4:	FE=191	1.0480	.8534	1.0323	.8269
KI=1110.3:	FE=192	.2928	.2192	.2792	.2150
KI=1112.6:	FE=193	1.9488	1.8569	1.9276	1.7613
KI=1115.8:	FE=194	1.6920	1.6577	1.6589	1.5806
KI=1117.7:	FE=195	.7908	.7817	.7755	.7220
KI=1119.7:	FE=196	.1167	.1645	.1144	.1014
KI=1123.4:	FE=198	.2715	.3809	.2722	.2745
KI=1127.0:	FE=199	1.0597	1.1578	1.1367	1.0456
KI=1129.4:	FE=200	1.5449	1.9394	1.9037	1.5092
KI=1132.7:	FE=201	.1538	.6281	.4533	0.0000
KI=1133.7:	FE=202	0.0000	0.0000	.1668	0.0000
KI=1135.0:	FE=203	.2157	.5741	.5487	.2086
KI=1137.1:	FE=204	.1562	.3870	.3889	.1578
KI=1139.7:	FE=205	.9284	1.2172	1.1781	.9551
KI=1141.0:	FE=206	.8428	.9652	.9536	.7988
KI=1144.0:	FE=207	1.4588	1.6669	1.6332	1.4435
KI=1148.3:	FE=208	.7382	.8101	.7969	.7295
KI=1149.8:	FE=209	.3220	.3894	.3675	.3261
KI=1152.6:	FE=210	1.2774	1.3527	1.3403	1.2555
KI=1155.0:	FE=211	.7165	.7391	.7433	.6617
KI=1156.1:	FE=212	1.5085	1.5835	1.5262	1.5236
KI=1158.0:	FE=213	.2038	.2346	.2200	.2074
KI=1159.8:	FE=214	1.4605	1.5200	1.5083	1.4410
KI=1161.8:	FE=215	.3937	.4269	.4132	.3725
KI=1164.2:	FE=216	2.7509	2.8367	2.7871	2.7046
KI=1170.4:	FE=217	2.6437	2.6492	2.6285	2.5116
KI=1171.4:	FE=218	1.3222	1.4342	1.3586	1.3714
KI=1175.9:	FE=219	.5816	.6257	.5153	.5638
KI=1179.7:	FE=220	.7414	.7581	.7436	.7195
KI=1181.4:	FE=221	.9082	.9291	.9063	.8845
KI=1185.3:	FE=222	2.0774	2.1091	2.0606	2.0376
KI=1189.6:	FE=223	1.0247	1.0337	1.0191	.9905
KI=1191.5:	FE=224	.8464	.8451	.8222	.8175
KI=1193.9:	FE=225	1.1459	1.1250	1.1000	1.0920
\$1200-n-C12-ANE:	FE=227	12.6743	12.6072	12.4043	12.3729
KI=1203.4:	FE=228	.5052	.4500	.4480	.4730
KI=1205.6:	FE=229	.4210	.3391	.4086	.3124
KI=1207.2:	FE=230	.1613	0.0000	0.0000	.0862
KI=1210.9:	FE=231	.9520	.6149	.6758	.6724
KI=1214.2:	FE=232	4.1791	3.7912	3.7498	3.7383
KI=1218.2:	FE=233	.5534	.2594	.2523	.2004
KI=1220.0:	FE=234	.3022	0.0000	0.0000	0.0000
KI=1221.7:	FE=235	.5273	.2545	.2390	.2485
KI=1224.3:	FE=236	.3518	.2957	.2925	.2906
KI=1227.8:	FE=237	.9893	.9393	.9294	.9245
KI=1233.9:	FE=238	1.9850	1.9932	1.9801	1.9593

TABLE 4 (continued)

KI=1238.6:	FE=239	1.2190	1.2240	1.2236	1.2097
KI=1241.7:	FE=240	.5785	.5813	.5680	.5706
KI=1245.4:	FE=241	.4511	.4475	.4522	.4467
KI=1248.5:	FE=242	.8081	.8099	.8164	.8066
KI=1252.8:	FE=243	1.1214	1.1122	1.1137	1.1122
KI=1254.8:	FE=244	1.6929	1.7039	1.6658	1.6543
KI=1259.3:	FE=245	1.2926	1.2969	1.2977	1.2987
KI=1264.0:	FE=246	1.6835	1.6915	1.6655	1.6725
KI=1267.6:	FE=247	.6054	.5987	.5958	.6040
KI=1270.2:	FE=248	1.1143	1.1345	1.1259	1.1160
KI=1273.1:	FE=249	3.4246	3.4447	3.3860	3.3924
KI=1276.1:	FE=250	0.0000	.1621	.1423	0.0000
KI=1277.5:	FE=251	0.0000	.2428	.1521	0.0000
KI=1282.7:	FE=253	1.8366	2.1308	1.8173	1.8996
KI=1285.6:	FE=254	.3035	.4382	.3109	.3254
KI=1288.3:	FE=255	0.0000	.1389	.1037	0.0000
KI=1294.2:	FE=256	.3819	.3760	.3829	.4396
\$1300-n-C13-ANE:	FE=257	10.6788	10.7423	10.5614	10.5366
KI=1304.4:	FE=258	0.0000	0.0000	0.0000	.3478
KI=1309.6:	FE=259	.5598	.5603	.5641	.5527
KI=1311.5:	FE=260	.4018	.3826	.3839	.3961
KI=1318.0:	FE=262	1.2629	1.2749	.6261	.6129
KI=1323.1:	FE=263	.3714	.3676	.2588	.2403
KI=1328.0:	FE=264	.0957	0.0000	.6109	0.0000
KI=1333.4:	FE=265	.4348	.3533	.4679	.4353
KI=1338.4:	FE=266	.9705	.4879	.9908	.9651
KI=1342.2:	FE=267	.2876	.1839	.2859	.2747
KI=1344.5:	FE=268	.1028	0.0000	.1058	.0963
KI=1347.5:	FE=269	.1698	.1737	.1739	.1716
KI=1351.1:	FE=270	.7589	.7660	.7551	.7510
KI=1354.0:	FE=271	.3843	.3848	.3858	.3868
KI=1358.9:	FE=272	.7045	.6711	.6666	.7050
KI=1364.0:	FE=273	1.4031	1.1607	1.0577	1.3934
KI=1370.3:	FE=274	.6906	.6311	.6247	.6870
KI=1376.7:	FE=275	1.7498	1.7539	1.7311	1.7275
KI=1383.0:	FE=276	.3246	.3325	.3786	.3858
KI=1388.6:	FE=277	.2742	.2746	.2680	.2748
KI=1393.4:	FE=278	1.1241	1.2198	1.1027	1.1123
\$1400-n-C14-ANE:	FE=279	5.1400	5.3106	5.0899	5.0967
KI=1404.0:	FE=280	.2403	.2615	.2452	.2413
KI=1407.9:	FE=281	.7557	.7564	.7561	.7534
KI=1411.1:	FE=282	.6393	.6542	.6365	.6388
KI=1413.6:	FE=283	.0886	.0915	.0883	.0916
KI=1427.2:	FE=286	.2439	.4059	.3897	.3905
KI=1430.3:	FE=287	.1185	.1241	.1190	.1181
KI=1434.1:	FE=288	.1031	.0938	.0986	.0934
KI=1443.2:	FE=289	.2558	.2611	.2539	.2719
KI=1446.1:	FE=290	.1159	.1211	.1133	.1527
KI=1450.5:	FE=291	0.0000	0.0000	0.0000	.2881
KI=1453.4:	FE=292	.1716	.1735	.1753	.2213
KI=1458.7:	FE=293	.2253	.2379	.2226	.2799
KI=1462.7:	FE=294	1.1446	1.2310	1.1365	1.2211
KI=1470.7:	FE=295	.2651	.2763	.2635	.2664
\$1500-n-C15-ANE:	FE=296	1.4649	1.4850	1.4551	1.4572
\$1600-n-C16-ANE:	FE=297	.2339	.2376	.2326	.2352
\$ANTH-d10(1S)(KI=1772)		10.0000	10.0000	10.0000	10.0000
\$2118-(IMPURITY #3)		.9588	0.0000	.8366	.8482
TOTAL CONCENTRATION		598.9200	629.2556	626.3503	593.6917
CONC. NAMED					
PEAKS (mg/ml )		6.088E+02	6.102E+02	5.984E+02	5.882E+02

TABLE 4 (Concluded)

TOTAL CONC(mg/ml )	5.989E+02	6.293E+02	6.264E+02	5.937E+02
% CONC. NAMED VS. TOTAL	101.64600	96.97392	95.54373	99.07463
NO. OF NAMED PEAKS	273	271	273	273
TOTAL NO. OF PEAKS	275	276	276	274
% NAMED VS. TOTAL PEAKS	99.27274	98.18840	98.91304	99.63504



TABLE 5. EXAMPLE OF REP6 DATA BASE MANAGEMENT PROGRAM  
OUTPUT FOR DATA BASE USED IN TABLE 4

STATISTICAL SUMMARY OF MH11 DATA BASE

CONSISTING OF 4 SAMPLES  
CONCENTRATION (mg/ml)

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	XREL STANDARD DEVIATION	NUMBER OF SAMPLES
KI= 377.21	FE=001	1.15E-01	2.21E-02	1.01E-02	8.82E+00	4
KI= 388.01	FE=002	4.11E-01	4.89E-02	2.16E-02	5.26E+00	4
\$400-n-C4-ANE1	FE=003	1.27E+00	1.53E-01	6.35E-02	5.00E+00	4
KI= 457.61	FE=004	5.44E+00	4.30E-01	1.83E-01	3.36E+00	4
\$500-n-C5-ANE1	FE=005	8.24E+00	6.23E-01	2.60E-01	3.16E+00	4
KI= 507.01	FE=006	1.31E-01				1
KI= 514.31	FE=008	9.99E-02	3.50E-03	2.48E-03	2.48E+00	2
KI= 520.11	FE=009	7.08E-01	3.22E-02	1.53E-02	2.16E+00	4
CH2CL2 SOLVENT		0.00E+00	0.00E+00	0.00E+00	1.70E+38	4
KI= 549.71	FE=010	1.30E+00	9.35E-02	3.85E-02	2.97E+00	4
KI= 552.41	FE=011	1.57E+00	9.34E-02	4.06E-02	2.58E+00	4
IMPURITY #1(KI= 558.6)		1.55E-01	1.02E-01	5.55E-02	3.57E+01	4
KI= 560.41	FE=012	9.31E+00	4.00E-01	2.09E-01	2.25E+00	4
KI= 577.31	FE=013	6.50E+00	3.60E-01	1.60E-01	2.46E+00	4
\$600-n-C6-ANE1	FE=014	1.59E+01	8.82E-01	3.75E-01	2.36E+00	4
KI= 609.21	FE=015	9.83E-02				1
KI= 611.21	FE=016	1.11E-01	1.54E-02	6.75E-03	6.10E+00	4
KI= 613.91	FE=017	1.78E-01	2.97E-02	1.27E-02	7.12E+00	4
KI= 624.81	FE=018	8.45E+00	4.46E-01	1.92E-01	2.27E+00	4
KI= 627.31	FE=019	1.07E-01	2.13E-02	1.11E-02	1.04E+01	3
KI= 632.41	FE=020	1.64E+00	8.89E-02	4.03E-02	2.46E+00	4
KI= 653.01	FE=021	9.42E-01	4.97E-02	2.23E-02	2.36E+00	4
KI= 656.11	FE=022	7.99E+00	4.09E-01	1.78E-01	2.23E+00	4
KI= 658.81	FE=023	3.60E+00	1.40E-01	6.24E-02	1.74E+00	4
KI= 669.01	FE=024	4.66E+00	1.58E-01	8.15E-02	1.75E+00	4
KI= 670.41	FE=025	1.14E+01	5.93E-01	2.55E-01	2.23E+00	4
IMPURITY #2(KI= 674.4)		7.50E-01	3.39E-02	1.39E-02	1.85E+00	4
KI= 677.41	FE=026	1.38E+01	6.60E-01	2.89E-01	2.10E+00	4
KI= 679.81	FE=027	2.45E+00	1.07E-01	4.73E-02	1.93E+00	4
KI= 682.01	FE=028	2.35E+00	1.08E-01	4.78E-02	2.04E+00	4
KI= 684.61	FE=029	4.25E+00	1.87E-01	8.33E-02	1.96E+00	4
KI= 685.81	FE=030	1.33E+00	6.73E-02	3.00E-02	2.26E+00	4
\$700-n-C7-ANE1	FE=031	2.51E+01	1.14E+00	5.05E-01	2.01E+00	4
KI= 701.81	FE=032	1.31E-01	5.82E-03	4.11E-03	3.13E+00	2
KI= 705.01	FE=033	1.12E-01	4.51E-03	1.91E-03	1.70E+00	4
KI= 706.71	FE=034	8.97E-02	4.26E-03	3.01E-03	3.36E+00	2
KI= 708.01	FE=035	1.79E-01	9.84E-03	4.26E-03	2.38E+00	4
KI= 712.51	FE=036	1.59E+01	6.97E-01	3.12E-01	1.97E+00	4
KI= 715.61	FE=037	1.43E+00	6.10E-02	2.95E-02	2.06E+00	4
KI= 719.11	FE=038	1.04E+00	3.42E-02	1.62E-02	1.56E+00	4
KI= 725.81	FE=039	1.61E+00	5.73E-02	2.87E-02	1.78E+00	4
KI= 730.01	FE=040	2.39E+00	1.07E-01	4.91E-02	2.06E+00	4
KI= 731.01	FE=041	4.04E+00	1.60E-01	8.00E-02	1.98E+00	4
KI= 733.61	FE=042	1.60E+00	6.89E-02	3.34E-02	2.08E+00	4
KI= 735.01	FE=043	1.45E+00	6.33E-02	2.94E-02	2.03E+00	4
KI= 741.21	FE=044	1.54E+00	7.08E-02	3.04E-02	1.97E+00	4
KI= 743.31	FE=045	4.89E-01	3.55E-02	1.46E-02	2.99E+00	4
KI= 745.41	FE=046	4.33E-01	1.11E-01	5.11E-02	1.18E+01	4
KI= 749.91	FE=047	1.31E-01	7.22E-03	3.42E-03	2.62E+00	4
KI= 753.91	FE=048	5.98E-01	3.00E-02	1.41E-02	2.36E+00	4
KI= 757.11	FE=049	4.25E+00	1.66E-01	7.75E-02	1.82E+00	4
KI= 758.81	FE=050	8.42E+00	2.81E-01	1.36E-01	1.62E+00	4
KI= 762.01	FE=051	2.98E-01	1.62E-02	8.74E-03	2.94E+00	4

TABLE 5 (continued)

KI= 765.31	FE=052	1.77E+01	7.16E-01	3.26E-01	1.83E+00	4
KI= 766.41	FE=053	6.95E+00	2.49E-01	1.22E-01	1.76E+00	4
KI= 768.81	FE=054	4.62E+00	1.77E-01	8.34E-02	1.80E+00	4
KI= 770.61	FE=055	2.49E+00	9.59E-02	4.38E-02	1.76E+00	4
KI= 772.41	FE=056	2.02E+01	7.80E-01	3.62E-01	1.79E+00	4
KI= 775.21	FE=057	8.31E-01	3.28E-02	1.63E-02	1.96E+00	4
KI= 781.01	FE=058	1.13E+00	5.07E-02	2.24E-02	1.99E+00	4
KI= 783.21	FE=059	6.90E-01	2.36E-02	1.02E-02	1.48E+00	4
KI= 784.41	FE=060	1.28E+00	1.60E-01	7.03E-02	5.48E+00	4
KI= 785.41	FE=061	1.46E-01	2.86E-02	1.43E-02	9.76E+00	3
KI= 786.91	FE=062	2.55E+00	1.33E-01	6.02E-02	2.36E+00	4
KI= 791.11	FE=063	9.26E-02	4.62E-03	2.32E-03	2.50E+00	4
KI= 794.41	FE=064	6.27E-01	4.65E-02	2.04E-02	3.26E+00	4
KI= 795.71	FE=065	1.47E+00	1.29E-01	5.52E-02	3.76E+00	4
8900-n-C8-ANE1	FE=066	2.68E+01	9.80E-01	4.84E-01	1.81E+00	4
KI= 802.51	FE=067	1.05E-01	2.43E-02	1.16E-02	1.10E+01	4
KI= 805.71	FE=068	1.33E-01	1.05E-02	5.55E-03	4.17E+00	3
KI= 807.11	FE=069	2.39E-01	7.17E-02	3.14E-02	1.31E+01	4
KI= 808.91	FE=070	9.49E-02	2.10E-02	1.17E-02	1.24E+01	3
KI= 812.31	FE=071	5.70E-01	3.53E-02	1.53E-02	2.68E+00	4
KI= 813.61	FE=072	2.80E-01	1.53E-02	6.96E-03	2.49E+00	4
KI= 817.01	FE=073	9.05E-01	2.84E-02	1.26E-02	1.39E+00	4
KI= 818.21	FE=074	8.24E-01	3.31E-02	1.51E-02	1.83E+00	4
KI= 821.31	FE=075	2.23E+00	6.75E-02	3.01E-02	1.35E+00	4
KI= 824.21	FE=076	3.87E+00	1.29E-01	6.17E-02	1.60E+00	4
KI= 825.71	FE=077	1.09E+00	3.47E-02	1.59E-02	1.45E+00	4
KI= 828.11	FE=078	5.66E+00	2.64E-01	1.10E-01	1.95E+00	4
KI= 834.41	FE=079	6.28E+00	2.13E-01	9.93E-02	1.58E+00	4
KI= 837.01	FE=080	2.48E-01	5.36E-03	2.21E-03	8.90E-01	4
KI= 840.81	FE=081	2.15E-01	1.30E-02	5.50E-03	2.56E+00	4
KI= 842.71	FE=082	2.05E+00	7.35E-02	3.31E-02	1.62E+00	4
KI= 844.21	FE=083	5.89E-01	2.55E-02	1.20E-02	2.04E+00	4
KI= 846.21	FE=084	2.50E-01	7.32E-03	3.24E-03	1.29E+00	4
KI= 848.21	FE=085	1.30E-01	1.74E-02	8.44E-03	6.49E+00	4
KI= 850.91	FE=086	9.19E-02				1
KI= 852.81	FE=087	1.73E-01	1.03E-02	5.30E-03	3.06E+00	4
KI= 854.41	FE=088	4.55E+00	1.32E-01	7.07E-02	1.55E+00	4
KI= 856.11	FE=089	1.74E+00	4.76E-02	2.41E-02	1.39E+00	4
KI= 860.01	FE=090	1.10E+00	3.18E-02	1.56E-02	1.42E+00	4
KI= 862.21	FE=091	8.13E+00	2.60E-01	1.18E-01	1.45E+00	4
KI= 863.81	FE=092	5.48E+00	1.81E-01	8.93E-02	1.63E+00	4
KI= 865.01	FE=093	6.35E+00	1.81E-01	8.82E-02	1.39E+00	4
KI= 867.41	FE=094	3.46E-01	5.13E-02	2.31E-02	6.64E+00	4
KI= 869.51	FE=095	1.44E+00	4.59E-02	2.14E-02	1.49E+00	4
KI= 871.21	FE=096	7.14E+00	2.12E-01	1.05E-01	1.47E+00	4
KI= 873.11	FE=097	3.48E-01	7.28E-02	3.54E-02	1.02E+01	4
KI= 877.11	FE=098	4.10E-01	2.11E-02	8.95E-03	2.18E+00	4
KI= 880.01	FE=099	2.84E+00	7.70E-02	3.58E-02	1.25E+00	4
KI= 881.61	FE=100	1.12E+00	4.71E-02	1.93E-02	1.72E+00	4
KI= 884.51	FE=102	3.60E+00	5.99E-02	2.68E-02	7.43E-01	4
KI= 887.41	FE=103	3.18E-01	4.25E-02	2.03E-02	6.40E+00	4
KI= 890.91	FE=104	2.89E-01	3.76E-02	1.74E-02	6.02E+00	4
KI= 892.61	FE=105	1.65E-01	2.38E-02	1.09E-02	6.61E+00	4
KI= 894.61	FE=106	4.39E-01	1.65E-02	7.10E-03	1.62E+00	4
KI= 895.91	FE=107	4.21E-01	1.84E-02	8.35E-03	1.99E+00	4
KI= 897.61	FE=108	8.23E-01	2.69E-02	1.29E-02	1.56E+00	4
8900-n-C9-ANE1	FE=109	1.60E+01	6.26E-01	2.62E-01	1.63E+00	4
KI= 901.31	FE=110	1.62E-01	4.73E-03	3.35E-03	2.06E+00	2
KI= 908.41	FE=112	1.16E+00	1.03E-01	4.85E-02	4.20E+00	4
KI= 910.81	FE=113	7.07E-01	2.39E-01	1.17E-01	1.66E+01	4
KI= 913.91	FE=114	3.99E-01	1.60E-01	7.64E-02	1.91E+01	4

TABLE 5 (continued)

KI= 915.41	FE=115	3.13E-01	1.20E-01	5.83E-02	1.87E+01	4
KI= 917.71	FE=116	1.64E+00	1.68E-01	7.54E-02	4.60E+00	4
KI= 920.11	FE=117	4.69E-01	8.76E-02	4.30E-02	9.17E+00	4
KI= 922.61	FE=118	2.14E+00	5.39E-02	2.40E-02	1.12E+00	4
KI= 924.71	FE=119	1.18E+00	1.77E-02	8.51E-03	7.20E-01	4
KI= 929.11	FE=120	1.74E+00	1.05E-01	5.99E-02	3.45E+00	4
KI= 933.51	FE=122	3.59E+00	6.50E-01	3.31E-01	9.20E+00	4
KI= 939.41	FE=123	2.79E+00	7.06E-01	3.37E-01	1.21E+01	4
KI= 945.31	FE=125	1.36E+00	1.38E-01	6.23E-02	4.59E+00	4
KI= 947.41	FE=126	1.25E+00	7.52E-02	3.50E-02	2.81E+00	4
KI= 952.01	FE=127	8.05E-01	1.90E-02	7.84E-03	9.74E-01	4
KI= 953.51	FE=128	1.45E+00	5.68E-02	2.39E-02	1.66E+00	4
KI= 955.81	FE=129	3.97E+00	1.52E-01	6.58E-02	1.66E+00	4
KI= 956.81	FE=130	1.37E+00	1.26E-01	5.81E-02	4.24E+00	4
KI= 960.51	FE=131	6.28E-01	1.86E-01	8.64E-02	1.04E+01	4
KI= 962.11	FE=132	4.39E+00	5.16E-01	2.32E-01	5.28E+00	4
KI= 964.71	FE=133	2.23E+00	7.30E-01	3.51E-01	1.58E+01	4
KI= 966.11	FE=134	3.42E-01				1
KI= 967.41	FE=135	6.54E-01	7.51E-01	3.72E-01	5.69E+01	4
KI= 970.81	FE=136	2.27E+00	1.12E-01	4.61E-02	2.04E+00	4
KI= 972.71	FE=137	1.51E+00	1.05E-01	4.36E-02	2.89E+00	4
KI= 974.91	FE=138	1.09E-01	5.88E-02	2.70E-02	2.48E+01	4
KI= 976.91	FE=139	1.43E+00	1.00E-01	4.14E-02	2.90E+00	4
KI= 979.21	FE=140	1.29E+00	9.12E-02	3.77E-02	2.91E+00	4
KI= 981.71	FE=142	5.11E-01	5.35E-02	2.25E-02	4.40E+00	4
KI= 983.31	FE=143	2.11E-01	5.60E-02	2.48E-02	1.18E+01	4
KI= 986.21	FE=144	7.02E+00	1.69E-01	7.30E-02	1.04E+00	4
KI= 989.01	FE=145	8.07E-01	7.15E-02	2.94E-02	3.64E+00	4
KI= 993.51	FE=146	9.29E-01	7.78E-02	3.29E-02	3.54E+00	4
KI= 995.31	FE=147	2.75E-01	1.12E-02	4.84E-03	1.76E+00	4
KI= 996.81	FE=148	2.42E-01	1.28E-02	6.04E-03	2.50E+00	4
SI000-n-C10-ANE	FE=149	1.29E+01	3.18E-01	1.54E-01	1.20E+00	4
KI=1003.91	FE=150	6.83E-01	1.67E-02	7.15E-03	1.05E+00	4
KI=1009.01	FE=151	1.05E-01	5.89E-03	4.16E-03	3.96E+00	2
KI=1013.91	FE=152	3.52E+00	7.47E-02	3.97E-02	1.13E+00	4
KI=1017.01	FE=153	1.30E+00	5.46E-02	2.61E-02	2.00E+00	4
KI=1020.11	FE=155	1.04E+00	3.50E-02	1.66E-02	1.60E+00	4
KI=1022.91	FE=156	2.89E+00	4.87E-02	2.67E-02	9.26E-01	4
KI=1025.81	FE=157	2.09E+00	4.20E-02	2.29E-02	1.10E+00	4
KI=1028.41	FE=158	1.35E+00	1.26E-01	5.85E-02	4.34E+00	4
KI=1031.61	FE=159	8.49E-01	1.02E-01	4.73E-02	5.57E+00	4
KI=1033.41	FE=160	3.14E-01	6.78E-02	3.16E-02	1.01E+01	4
KI=1034.61	FE=161	6.92E-01	1.20E-01	5.65E-02	9.17E+00	4
KI=1036.61	FE=162	2.85E-01	1.13E-01	5.53E-02	1.94E+01	4
KI=1038.51	FE=163	7.12E-01	1.81E-01	8.73E-02	1.23E+01	4
KI=1040.61	FE=164	1.28E-01	1.41E-01	6.97E-02	5.46E+01	4
KI=1043.21	FE=165	1.24E+00	2.99E-01	1.45E-01	1.17E+01	4
KI=1044.71	FE=166	4.48E-01	1.59E-01	7.72E-02	1.72E+01	4
KI=1046.41	FE=167	1.95E+00	4.40E-01	2.14E-01	1.10E+01	4
KI=1049.41	FE=168	6.90E-01	2.46E-01	1.19E-01	1.72E+01	4
KI=1050.61	FE=169	1.12E+00	4.67E-01	2.32E-01	2.06E+01	4
KI=1053.81	FE=170	1.55E+00	9.42E-01	4.65E-01	2.97E+01	4
KI=1057.91	FE=173	1.26E+00	4.01E-01	1.96E-01	1.56E+01	4
KI=1060.81	FE=174	2.06E+00	1.81E-01	8.49E-02	4.12E+00	4
KI=1064.61	FE=175	2.44E+00	6.44E-02	3.08E-02	1.26E+00	4
KI=1066.21	FE=176	6.02E-01	1.61E-02	6.93E-03	1.15E+00	4
KI=1070.61	FE=177	3.19E+00	7.20E-02	3.46E-02	1.09E+00	4
KI=1072.81	FE=178	1.78E+00	5.10E-02	2.58E-02	1.45E+00	4
KI=1079.01	FE=179	3.05E+00	8.10E-02	3.92E-02	1.29E+00	4
KI=1081.61	FE=180	8.09E-01	2.49E-02	1.07E-02	1.32E+00	4
KI=1084.31	FE=181	9.46E-01	3.07E-02	1.29E-02	1.37E+00	4

TABLE 5 (continued)

KI=1087.21	FE=182	5.81E-01	3.06E-02	1.27E-02	2.18E+00	4
KI=1089.41	FE=183	4.49E-01	2.24E-02	9.96E-03	2.22E+00	4
KI=1090.81	FE=184	4.92E-01	2.71E-02	1.30E-02	2.64E+00	4
KI=1093.81	FE=185	2.36E-01	2.71E-02	1.25E-02	5.27E+00	4
KI=1096.01	FE=186	8.94E-01	5.11E-02	2.10E-02	2.35E+00	4
§1100-n-C11-ANE	FE=187	1.52E+01	4.86E-01	2.32E-01	1.53E+00	4
KI=1101.71	FE=188	1.87E-01	1.46E-02	7.68E-03	4.10E+00	3
KI=1104.41	FE=189	4.65E-01	3.91E-02	1.78E-02	3.83E+00	4
KI=1106.61	FE=190	9.72E-02	3.41E-03	2.41E-03	2.48E+00	2
KI=1108.41	FE=191	9.40E-01	2.21E-01	1.16E-01	1.24E+01	4
KI=1110.31	FE=192	2.52E-01	7.78E-02	4.02E-02	1.60E+01	4
KI=1112.61	FE=193	1.87E+00	1.87E-01	8.46E-02	4.51E+00	4
KI=1115.81	FE=194	1.65E+00	1.11E-01	4.72E-02	2.87E+00	4
KI=1117.71	FE=195	7.68E-01	6.88E-02	3.10E-02	4.04E+00	4
KI=1119.71	FE=196	1.24E-01	6.31E-02	2.77E-02	2.23E+01	4
KI=1123.41	FE=198	3.00E-01	1.09E-01	5.41E-02	1.80E+01	4
KI=1127.01	FE=199	1.10E+00	1.12E-01	5.56E-02	5.05E+00	4
KI=1129.41	FE=200	1.72E+00	4.30E-01	2.29E-01	1.33E+01	4
KI=1132.71	FE=201	4.12E-01	4.74E-01	2.40E-01	5.83E+01	3
KI=1133.71	FE=202	1.67E-01				1
KI=1135.01	FE=203	3.87E-01	3.66E-01	2.02E-01	5.22E+01	4
KI=1137.11	FE=204	2.72E-01	2.33E-01	1.33E-01	4.89E+01	4
KI=1139.71	FE=205	1.07E+00	2.89E-01	1.49E-01	1.39E+01	4
KI=1141.01	FE=206	8.90E-01	1.66E-01	8.22E-02	9.23E+00	4
KI=1144.01	FE=207	1.55E+00	2.23E-01	1.16E-01	7.47E+00	4
KI=1148.31	FE=208	7.69E-01	8.07E-02	4.07E-02	5.30E+00	4
KI=1149.81	FE=209	3.51E-01	6.74E-02	3.27E-02	9.30E+00	4
KI=1152.61	FE=210	1.31E+00	9.72E-02	4.73E-02	3.62E+00	4
KI=1155.01	FE=211	7.15E-01	8.16E-02	3.75E-02	5.25E+00	4
KI=1156.11	FE=212	1.54E+00	7.50E-02	3.30E-02	2.17E+00	4
KI=1158.01	FE=213	2.16E-01	3.08E-02	1.40E-02	6.45E+00	4
KI=1159.81	FE=214	1.48E+00	7.90E-02	3.78E-02	2.55E+00	4
KI=1161.81	FE=215	4.02E-01	5.43E-02	2.37E-02	5.90E+00	4
KI=1164.21	FE=216	2.77E+00	1.32E-01	5.59E-02	2.02E+00	4
KI=1170.41	FE=217	2.61E+00	1.38E-01	6.50E-02	2.49E+00	4
KI=1171.41	FE=218	1.37E+00	1.12E-01	4.67E-02	3.40E+00	4
KI=1175.91	FE=219	5.72E-01	1.10E-01	4.57E-02	7.99E+00	4
KI=1179.71	FE=220	7.41E-01	3.87E-02	1.60E-02	2.16E+00	4
KI=1181.41	FE=221	9.07E-01	4.46E-02	1.82E-02	2.01E+00	4
KI=1185.31	FE=222	2.07E+00	7.15E-02	3.01E-02	1.45E+00	4
KI=1189.61	FE=223	1.02E+00	4.33E-02	1.87E-02	1.84E+00	4
KI=1191.51	FE=224	8.33E-01	2.89E-02	1.51E-02	1.81E+00	4
KI=1193.91	FE=225	1.12E+00	5.39E-02	2.46E-02	2.20E+00	4
§1200-n-C12-ANE	FE=227	1.25E+01	3.01E-01	1.49E-01	1.19E+00	4
KI=1203.41	FE=228	4.69E-01	5.72E-02	2.66E-02	5.68E+00	4
KI=1205.61	FE=229	3.70E-01	1.09E-01	5.28E-02	1.43E+01	4
KI=1207.21	FE=230	1.24E-01	7.52E-02	5.32E-02	4.30E+01	2
KI=1210.91	FE=231	7.29E-01	3.37E-01	1.51E-01	2.08E+01	4
KI=1214.21	FE=232	3.86E+00	4.41E-01	2.11E-01	5.46E+00	4
KI=1218.21	FE=233	3.16E-01	3.53E-01	1.60E-01	5.06E+01	4
KI=1220.01	FE=234	3.02E-01				1
KI=1221.71	FE=235	3.17E-01	2.88E-01	1.40E-01	4.41E+01	4
KI=1224.31	FE=236	3.08E-01	6.12E-02	2.95E-02	9.59E+00	4
KI=1227.81	FE=237	9.46E-01	6.48E-02	2.98E-02	3.15E+00	4
KI=1233.91	FE=238	1.98E+00	3.39E-02	1.45E-02	7.30E-01	4
KI=1238.61	FE=239	1.22E+00	1.44E-02	6.66E-03	5.47E-01	4
KI=1241.71	FE=240	5.75E-01	1.32E-02	6.29E-03	1.09E+00	4
KI=1245.41	FE=241	4.50E-01	6.20E-03	2.96E-03	6.59E-01	4
KI=1248.51	FE=242	8.10E-01	9.82E-03	4.32E-03	5.34E-01	4
KI=1252.81	FE=243	1.11E+00	9.27E-03	4.43E-03	3.97E-01	4
KI=1254.81	FE=244	1.68E+00	4.97E-02	2.31E-02	1.38E+00	4

TABLE 5 (Concluded)

KI=1259.3:	FE=245	1.30E+00	6.12E-03	2.70E-03	2.08E-01	4
KI=1264.0:	FE=246	1.68E+00	2.60E-02	1.15E-02	6.86E-01	4
KI=1267.6:	FE=247	6.01E-01	9.62E-03	4.52E-03	7.51E-01	4
KI=1270.2:	FE=248	1.12E+00	2.02E-02	9.39E-03	8.36E-01	4
KI=1273.1:	FE=249	3.41E+00	5.87E-02	2.76E-02	8.09E-01	4
KI=1276.1:	FE=250	1.52E-01	1.98E-02	1.40E-02	9.19E+00	2
KI=1277.5:	FE=251	1.97E-01	9.06E-02	6.41E-02	3.25E+01	2
KI=1282.7:	FE=253	1.92E+00	3.14E-01	1.44E-01	7.51E+00	4
KI=1285.6:	FE=254	3.44E-01	1.35E-01	6.31E-02	1.83E+01	4
KI=1288.3:	FE=255	1.21E-01	3.52E-02	2.49E-02	2.05E+01	2
KI=1294.2:	FE=256	3.95E-01	6.36E-02	2.98E-02	7.55E+00	4
\$1300-n-C13-ANE:	FE=257	1.06E+01	1.86E-01	9.13E-02	8.58E-01	4
KI=1304.4:	FE=258	3.48E-01				1
KI=1309.6:	FE=259	5.59E-01	1.13E-02	4.74E-03	8.48E-01	4
KI=1311.5:	FE=260	3.91E-01	1.91E-02	9.36E-03	2.39E+00	4
KI=1318.0:	FE=262	9.44E-01	6.62E-01	3.75E-01	3.97E+01	4
KI=1323.1:	FE=263	3.10E-01	1.31E-01	6.97E-02	2.25E+01	4
KI=1328.0:	FE=264	3.53E-01	5.15E-01	3.64E-01	1.03E+02	2
KI=1333.4:	FE=265	4.23E-01	1.15E-01	4.89E-02	1.16E+01	4
KI=1338.4:	FE=266	8.54E-01	5.03E-01	2.44E-01	2.86E+01	4
KI=1342.2:	FE=267	2.58E-01	1.04E-01	4.98E-02	1.93E+01	4
KI=1344.5:	FE=268	1.02E-01	9.52E-03	4.87E-03	4.79E+00	3
KI=1347.5:	FE=269	1.72E-01	4.07E-03	1.91E-03	1.11E+00	4
KI=1351.1:	FE=270	7.58E-01	1.50E-02	6.38E-03	8.42E-01	4
KI=1354.0:	FE=271	3.85E-01	2.49E-03	1.10E-03	2.85E-01	4
KI=1358.9:	FE=272	6.87E-01	3.84E-02	2.08E-02	3.03E+00	4
KI=1364.0:	FE=273	1.25E+00	3.45E-01	1.72E-01	1.37E+01	4
KI=1370.3:	FE=274	6.58E-01	6.60E-02	3.53E-02	5.36E+00	4
KI=1376.7:	FE=275	1.74E+00	2.63E-02	1.32E-02	7.58E-01	4
KI=1383.0:	FE=276	3.55E-01	6.12E-02	3.13E-02	8.81E+00	4
KI=1388.6:	FE=277	2.73E-01	6.75E-03	3.26E-03	1.20E+00	4
KI=1393.4:	FE=278	1.14E+00	1.17E-01	5.41E-02	4.75E+00	4
\$1400-n-C14-ANE:	FE=279	5.16E+00	2.21E-01	1.03E-01	2.00E+00	4
KI=1404.0:	FE=280	2.47E-01	2.12E-02	9.83E-03	3.98E+00	4
KI=1407.9:	FE=281	7.55E-01	3.07E-03	1.38E-03	1.83E-01	4
KI=1411.1:	FE=282	6.42E-01	1.77E-02	8.09E-03	1.26E+00	4
KI=1413.6:	FE=283	9.00E-02	3.33E-03	1.82E-03	2.02E+00	4
KI=1427.2:	FE=286	3.57E-01	1.62E-01	7.61E-02	2.13E+01	4
KI=1430.3:	FE=287	1.20E-01	6.09E-03	2.83E-03	2.36E+00	4
KI=1434.1:	FE=288	9.72E-02	9.73E-03	4.59E-03	4.72E+00	4
KI=1443.2:	FE=289	2.61E-01	1.80E-02	8.09E-03	3.10E+00	4
KI=1446.1:	FE=290	1.26E-01	3.94E-02	1.82E-02	1.45E+01	4
KI=1450.5:	FE=291	2.88E-01				1
KI=1453.4:	FE=292	1.85E-01	4.97E-02	2.40E-02	1.29E+01	4
KI=1458.7:	FE=293	2.54E-01	6.53E-02	3.48E-02	1.37E+01	4
KI=1462.7:	FE=294	1.19E+00	1.18E-01	5.77E-02	4.85E+00	4
KI=1470.7:	FE=295	2.68E-01	1.28E-02	5.78E-03	2.16E+00	4
\$1500-n-C15-ANE:	FE=296	1.47E+00	2.98E-02	1.36E-02	9.28E-01	4
\$1600-n-C16-ANE:	FE=297	2.35E-01	4.97E-03	2.12E-03	9.01E-01	4
\$ANTH-d10(1S)(KI=1772)		1.00E+01	3.81E-06	1.56E-06	1.56E-05	4
\$2118-(IMPURITY #3)		8.81E-01	1.22E-01	6.75E-02	7.66E+00	3
TOTAL CONCENTRATION		6.12E+02	3.56E+01	1.83E+01	3.03E+00	4

TABLE 6. EXAMPLE OF REP7 DATA BASE MANAGEMENT PROGRAM  
OUTPUT FOR DATA BASE USED IN TABLE 4

STATISTICAL SUMMARY OF MH11 DATA BASE						
CONSISTING OF 4 SAMPLES						
RETENTION INDEX (KI)						
COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	XREL STANDARD DEVIATION	NUMBER OF SAMPLES
KI= 377.2:	FE=001	377.22	1.29E-01	5.40E-02	1.43E-02	4
KI= 388.0:	FE=002	388.00	6.84E-02	3.98E-02	1.03E-02	4
\$400-n-C4-ANE:	FE=003	400.00	0.00E+00	0.00E+00	0.00E+00	4
KI= 457.6:	FE=004	457.59	2.24E-01	9.85E-02	2.15E-02	4
\$500-n-C5-ANE:	FE=005	500.00	0.00E+00	0.00E+00	0.00E+00	4
KI= 507.0:	FE=006	507.04				1
KI= 514.3:	FE=008	514.37	2.22E-01	1.57E-01	3.05E-02	2
KI= 520.1:	FE=009	520.07	3.34E-01	1.56E-01	3.00E-02	4
CH2CL2 SOLVENT		526.02	1.19E-01	5.02E-02	9.54E-03	4
KI= 549.7:	FE=010	549.80	1.53E-01	6.41E-02	1.17E-02	4
KI= 552.4:	FE=011	552.49	5.15E-02	2.32E-02	4.20E-03	4
IMPURITY #1(KI= 558.6)	FE=012	558.77	1.32E-01	5.89E-02	1.05E-02	4
KI= 560.4:	FE=012	560.41	4.83E-01	2.19E-01	3.90E-02	4
KI= 577.3:	FE=013	577.43	9.88E-02	4.42E-02	7.65E-03	4
\$600-n-C6-ANE:	FE=014	600.00	0.00E+00	0.00E+00	0.00E+00	4
KI= 609.2:	FE=015	609.16				1
KI= 611.2:	FE=016	611.12	1.59E-01	7.61E-02	1.24E-02	4
KI= 613.9:	FE=017	613.89	1.49E-01	7.29E-02	1.19E-02	4
KI= 624.8:	FE=018	624.84	3.80E-02	1.80E-02	2.89E-03	4
KI= 627.3:	FE=019	627.25	8.08E-02	4.28E-02	6.82E-03	3
KI= 632.4:	FE=020	632.46	1.67E-01	7.03E-02	1.11E-02	4
KI= 653.0:	FE=021	652.99	1.28E-01	5.97E-02	9.15E-03	4
KI= 656.1:	FE=022	656.14	1.28E-01	5.82E-02	8.87E-03	4
KI= 658.8:	FE=023	658.89	1.41E-01	6.63E-02	1.01E-02	4
KI= 669.0:	FE=024	669.02	1.56E-01	7.20E-02	1.08E-02	4
KI= 670.4:	FE=025	670.35	1.61E-01	7.54E-02	1.12E-02	4
IMPURITY #2(KI= 674.4)	FE=026	674.41	1.55E-01	7.24E-02	1.07E-02	4
KI= 677.4:	FE=026	677.40	1.56E-01	6.88E-02	1.01E-02	4
KI= 679.8:	FE=027	679.77	1.28E-01	5.52E-02	8.12E-03	4
KI= 682.0:	FE=028	682.00	8.67E-02	3.62E-02	5.31E-03	4
KI= 684.6:	FE=029	684.58	4.82E-02	2.15E-02	3.14E-03	4
KI= 685.8:	FE=030	685.76	3.71E-02	1.52E-02	2.22E-03	4
\$700-n-C7-ANE:	FE=031	700.00	0.00E+00	0.00E+00	0.00E+00	4
KI= 701.8:	FE=032	701.79	6.81E-02	4.82E-02	6.86E-03	2
KI= 705.0:	FE=033	705.01	1.99E-02	9.09E-03	1.29E-03	4
KI= 706.7:	FE=034	706.59	1.72E-02	1.22E-02	1.72E-03	2
KI= 708.0:	FE=035	708.08	5.65E-02	2.88E-02	4.06E-03	4
KI= 712.5:	FE=036	712.51	8.91E-03	3.69E-03	5.17E-04	4
KI= 715.6:	FE=037	715.65	2.71E-02	1.16E-02	1.62E-03	4
KI= 719.1:	FE=038	719.12	2.59E-02	1.13E-02	1.57E-03	4
KI= 725.8:	FE=039	725.82	4.30E-02	1.85E-02	2.54E-03	4
KI= 730.0:	FE=040	730.04	3.21E-02	1.38E-02	1.88E-03	4
KI= 731.0:	FE=041	730.98	2.77E-02	1.14E-02	1.56E-03	4
KI= 733.6:	FE=042	733.63	1.31E-02	6.79E-03	9.25E-04	4
KI= 735.0:	FE=043	735.05	1.61E-02	7.02E-03	9.55E-04	4
KI= 741.2:	FE=044	741.26	3.58E-02	1.47E-02	1.98E-03	4
KI= 743.3:	FE=045	743.31	2.49E-02	1.07E-02	1.44E-03	4
KI= 745.4:	FE=046	745.39	2.48E-02	1.09E-02	1.46E-03	4
KI= 749.9:	FE=047	749.93	1.01E-01	4.67E-02	6.22E-03	4
KI= 753.9:	FE=048	753.90	1.32E-02	6.19E-03	8.21E-04	4
KI= 757.1:	FE=049	757.15	4.71E-02	1.94E-02	2.57E-03	4
KI= 758.8:	FE=050	758.80	3.33E-02	1.61E-02	2.12E-03	4
KI= 762.0:	FE=051	761.99	2.47E-02	1.16E-02	1.53E-03	4

TABLE 6 (continued)

KI= 765.31	FE=052	765.28	8.42E-03	4.05E-03	5.30E-04	4
KI= 766.41	FE=053	766.37	1.93E-02	8.50E-03	1.11E-03	4
KI= 768.81	FE=054	768.86	4.98E-02	2.08E-02	2.71E-03	4
KI= 770.61	FE=055	770.65	7.32E-03	3.20E-03	4.16E-04	4
KI= 772.41	FE=056	772.38	5.74E-03	3.09E-03	4.00E-04	4
KI= 775.21	FE=057	775.23	4.81E-02	2.12E-02	2.74E-03	4
KI= 781.01	FE=058	781.05	2.91E-02	1.21E-02	1.56E-03	4
KI= 783.21	FE=059	783.18	1.89E-02	9.10E-03	1.16E-03	4
KI= 784.41	FE=060	784.40	2.71E-02	1.25E-02	1.59E-03	4
KI= 785.41	FE=061	785.48	5.52E-02	2.76E-02	3.51E-03	3
KI= 786.91	FE=062	786.92	3.30E-03	1.40E-03	1.78E-04	4
KI= 791.11	FE=063	791.06	6.74E-02	3.14E-02	3.97E-03	4
KI= 794.41	FE=064	794.47	4.70E-02	1.96E-02	2.47E-03	4
KI= 795.71	FE=065	795.71	5.46E-02	2.40E-02	3.01E-03	4
8800-n-C8-ANE1	FE=066	800.00	0.00E+00	0.00E+00	0.00E+00	4
KI= 802.51	FE=067	802.55	1.26E-01	5.68E-02	7.08E-03	4
KI= 805.71	FE=068	805.72	1.85E-01	9.27E-02	1.15E-02	3
KI= 807.11	FE=069	807.11	7.52E-02	3.27E-02	4.06E-03	4
KI= 808.91	FE=070	808.93	9.83E-02	5.63E-02	6.96E-03	3
KI= 812.31	FE=071	812.31	5.79E-02	3.21E-02	3.95E-03	4
KI= 813.61	FE=072	813.65	8.97E-02	4.85E-02	5.96E-03	4
KI= 817.01	FE=073	817.07	2.84E-02	1.30E-02	1.60E-03	4
KI= 818.21	FE=074	818.19	4.96E-02	2.25E-02	2.75E-03	4
KI= 821.31	FE=075	821.33	2.10E-02	9.46E-03	1.15E-03	4
KI= 824.21	FE=076	824.20	4.35E-02	1.95E-02	2.36E-03	4
KI= 825.71	FE=077	825.59	9.07E-01	4.56E-01	5.52E-02	4
KI= 828.11	FE=078	828.15	2.62E-02	1.13E-02	1.36E-03	4
KI= 834.41	FE=079	834.45	3.23E-02	1.54E-02	1.85E-03	4
KI= 837.01	FE=080	837.06	4.70E-02	1.95E-02	2.33E-03	4
KI= 840.81	FE=081	840.78	5.96E-02	2.83E-02	3.37E-03	4
KI= 842.71	FE=082	842.70	3.74E-02	1.53E-02	1.82E-03	4
KI= 844.21	FE=083	844.27	4.33E-02	1.79E-02	2.12E-03	4
KI= 846.21	FE=084	846.19	5.75E-02	3.05E-02	3.60E-03	4
KI= 848.21	FE=085	848.24	1.69E-01	8.32E-02	9.81E-03	4
KI= 850.91	FE=086	851.01				1
KI= 852.81	FE=087	852.87	9.62E-02	4.91E-02	5.75E-03	4
KI= 854.41	FE=088	854.46	7.74E-02	3.82E-02	4.47E-03	4
KI= 856.11	FE=089	856.16	3.42E-02	1.87E-02	2.18E-03	4
KI= 860.01	FE=090	860.01	1.22E-02	5.06E-03	5.88E-04	4
KI= 862.21	FE=091	862.18	2.84E-02	1.26E-02	1.46E-03	4
KI= 863.81	FE=092	863.84	1.87E-02	9.88E-03	1.14E-03	4
KI= 865.01	FE=093	864.97	7.20E-03	3.20E-03	3.70E-04	4
KI= 867.41	FE=094	867.44	4.22E-02	1.81E-02	2.09E-03	4
KI= 869.51	FE=095	869.52	2.01E-02	8.85E-03	1.02E-03	4
KI= 871.21	FE=096	871.20	3.26E-02	1.44E-02	1.66E-03	4
KI= 873.11	FE=097	873.11	1.11E-01	5.21E-02	5.97E-03	4
KI= 877.11	FE=098	877.14	4.79E-02	2.06E-02	2.35E-03	4
KI= 880.01	FE=099	880.01	2.09E-02	9.43E-03	1.07E-03	4
KI= 881.61	FE=100	881.59	2.51E-02	1.26E-02	1.43E-03	4
KI= 884.51	FE=102	884.50	3.17E-02	1.43E-02	1.62E-03	4
KI= 887.41	FE=103	887.38	3.26E-02	1.53E-02	1.72E-03	4
KI= 890.91	FE=104	890.96	9.61E-02	4.41E-02	4.95E-03	4
KI= 892.61	FE=105	892.58	1.57E-01	8.17E-02	9.16E-03	4
KI= 894.61	FE=106	894.57	5.54E-02	2.44E-02	2.73E-03	4
KI= 895.91	FE=107	895.92	5.07E-02	2.21E-02	2.47E-03	4
KI= 897.61	FE=108	897.66	4.33E-02	1.89E-02	2.10E-03	4
8900-n-C9-ANE1	FE=109	900.00	0.00E+00	0.00E+00	0.00E+00	4
KI= 901.31	FE=110	901.30	6.10E-04	4.40E-04	4.88E-05	2
KI= 908.41	FE=112	908.46	2.99E-02	1.25E-02	1.38E-03	4
KI= 910.81	FE=113	910.82	2.55E-02	1.05E-02	1.15E-03	4
KI= 913.91	FE=114	913.94	7.30E-02	3.31E-02	3.62E-03	4

TABLE 6 (continued)

KI= 915.41	FE=115	915.40	8.00E-02	3.31E-02	3.61E-03	4
KI= 917.71	FE=116	917.61	1.31E-01	5.89E-02	6.42E-03	4
KI= 920.11	FE=117	920.11	5.59E-02	2.59E-02	2.81E-03	4
KI= 922.61	FE=118	922.63	3.37E-02	1.59E-02	1.72E-03	4
KI= 924.71	FE=119	924.73	9.77E-03	4.86E-03	5.26E-04	4
KI= 929.11	FE=120	929.13	4.42E-02	2.23E-02	2.40E-03	4
KI= 933.51	FE=122	933.48	3.78E-02	1.69E-02	1.81E-03	4
KI= 939.41	FE=123	939.44	3.25E-02	1.47E-02	1.57E-03	4
KI= 945.31	FE=125	945.28	3.85E-02	1.67E-02	1.77E-03	4
KI= 947.41	FE=126	947.41	4.21E-02	1.80E-02	1.90E-03	4
KI= 952.01	FE=127	952.05	4.92E-02	2.03E-02	2.13E-03	4
KI= 953.51	FE=128	953.50	6.45E-02	2.64E-02	2.77E-03	4
KI= 955.81	FE=129	955.77	2.58E-02	1.28E-02	1.34E-03	4
KI= 956.81	FE=130	956.82	1.97E-02	9.38E-03	9.81E-04	4
KI= 960.51	FE=131	960.47	1.48E-02	6.92E-03	7.21E-04	4
KI= 962.11	FE=132	962.10	2.17E-02	9.92E-03	1.03E-03	4
KI= 964.71	FE=133	964.70	2.01E-02	9.01E-03	9.34E-04	4
KI= 966.11	FE=134	966.05				1
KI= 967.41	FE=135	967.38	7.09E-02	3.19E-02	3.29E-03	4
KI= 970.81	FE=136	970.86	2.71E-02	1.14E-02	1.18E-03	4
KI= 972.71	FE=137	972.74	1.22E-02	5.37E-03	5.52E-04	4
KI= 974.91	FE=138	974.90	5.73E-02	2.57E-02	2.64E-03	4
KI= 976.91	FE=139	976.92	5.19E-02	2.16E-02	2.21E-03	4
KI= 979.21	FE=140	979.22	4.76E-02	2.10E-02	2.14E-03	4
KI= 981.71	FE=142	981.69	2.93E-02	1.27E-02	1.30E-03	4
KI= 983.31	FE=143	983.26	4.82E-02	2.07E-02	2.11E-03	4
KI= 986.21	FE=144	986.19	2.42E-02	1.04E-02	1.06E-03	4
KI= 989.01	FE=145	988.99	4.21E-02	1.86E-02	1.88E-03	4
KI= 993.51	FE=146	993.51	5.99E-02	3.03E-02	3.05E-03	4
KI= 995.31	FE=147	995.30	6.52E-02	2.91E-02	2.92E-03	4
KI= 996.81	FE=148	996.82	9.20E-02	3.96E-02	3.97E-03	4
\$1000-n-C10-ANE	FE=149	1000.00	0.00E+00	0.00E+00	0.00E+00	4
KI=1003.91	FE=150	1003.87	4.69E-02	1.93E-02	1.92E-03	4
KI=1009.01	FE=151	1008.94	3.34E-02	2.37E-02	2.34E-03	2
KI=1013.91	FE=152	1013.87	6.62E-02	3.22E-02	3.17E-03	4
KI=1017.01	FE=153	1017.05	4.48E-02	2.41E-02	2.37E-03	4
KI=1020.11	FE=155	1020.09	4.87E-02	2.33E-02	2.29E-03	4
KI=1022.91	FE=156	1022.87	2.77E-02	1.32E-02	1.29E-03	4
KI=1025.81	FE=157	1025.77	3.49E-02	1.55E-02	1.51E-03	4
KI=1028.41	FE=158	1028.36	9.18E-02	4.31E-02	4.20E-03	4
KI=1031.61	FE=159	1031.61	5.52E-02	2.53E-02	2.45E-03	4
KI=1033.41	FE=160	1033.40	7.93E-02	3.47E-02	3.36E-03	4
KI=1034.61	FE=161	1034.57	3.54E-02	1.55E-02	1.50E-03	4
KI=1036.61	FE=162	1036.59	3.59E-02	1.60E-02	1.55E-03	4
KI=1038.51	FE=163	1038.50	3.13E-02	1.53E-02	1.47E-03	4
KI=1040.61	FE=164	1040.65	3.74E-02	1.89E-02	1.82E-03	4
KI=1043.21	FE=165	1043.24	2.37E-02	1.08E-02	1.03E-03	4
KI=1044.71	FE=166	1044.74	7.40E-02	3.03E-02	2.90E-03	4
KI=1046.41	FE=167	1046.38	2.34E-02	9.67E-03	9.24E-04	4
KI=1049.41	FE=168	1049.43	1.15E-02	5.73E-03	5.46E-04	4
KI=1050.61	FE=169	1050.60	4.86E-02	2.18E-02	2.07E-03	4
KI=1053.81	FE=170	1053.79	4.93E-02	2.12E-02	2.01E-03	4
KI=1057.91	FE=173	1057.92	3.49E-02	1.67E-02	1.58E-03	4
KI=1060.81	FE=174	1060.82	3.91E-02	1.73E-02	1.63E-03	4
KI=1064.61	FE=175	1064.57	2.47E-02	1.03E-02	9.70E-04	4
KI=1066.21	FE=176	1066.25	3.56E-02	1.68E-02	1.58E-03	4
KI=1070.61	FE=177	1070.64	3.71E-02	1.61E-02	1.50E-03	4
KI=1072.81	FE=178	1072.76	5.15E-02	2.43E-02	2.27E-03	4
KI=1079.01	FE=179	1079.04	9.28E-03	4.34E-03	4.03E-04	4
KI=1081.61	FE=180	1081.66	1.51E-01	6.60E-02	6.10E-03	4
KI=1084.31	FE=181	1084.33	3.59E-02	1.70E-02	1.57E-03	4



TABLE 6 (continued)

KI=1087.2:	FE=182	1087.17	1.84E-02	8.69E-03	7.99E-04	4
KI=1089.4:	FE=183	1089.43	3.69E-02	1.58E-02	1.45E-03	4
KI=1090.8:	FE=184	1090.81	5.79E-02	2.69E-02	2.46E-03	4
KI=1093.8:	FE=185	1093.84	7.42E-02	3.18E-02	2.91E-03	4
KI=1096.0:	FE=186	1095.97	2.37E-02	1.17E-02	1.07E-03	4
\$1100-n-C11-ANE:	FE=187	1100.00	0.00E+00	0.00E+00	0.00E+00	4
KI=1101.7:	FE=188	1101.64	1.81E-02	1.02E-02	9.28E-04	3
KI=1104.4:	FE=189	1104.49	7.64E-02	3.61E-02	3.27E-03	4
KI=1106.6:	FE=190	1106.63	2.08E-02	1.47E-02	1.33E-03	2
KI=1108.4:	FE=191	1108.46	4.76E-02	2.00E-02	1.80E-03	4
KI=1110.3:	FE=192	1110.32	1.78E-01	8.83E-02	7.96E-03	4
KI=1112.6:	FE=193	1112.61	4.98E-02	2.20E-02	1.98E-03	4
KI=1115.8:	FE=194	1115.76	3.47E-02	1.60E-02	1.44E-03	4
KI=1117.7:	FE=195	1117.74	7.13E-02	3.00E-02	2.69E-03	4
KI=1119.7:	FE=196	1119.71	7.03E-02	3.11E-02	2.78E-03	4
KI=1123.4:	FE=198	1123.46	2.95E-02	1.34E-02	1.19E-03	4
KI=1127.0:	FE=199	1127.03	3.59E-02	1.62E-02	1.43E-03	4
KI=1129.4:	FE=200	1129.46	5.64E-02	2.34E-02	2.07E-03	4
KI=1132.7:	FE=201	1132.66	6.59E-02	3.34E-02	2.95E-03	3
KI=1133.7:	FE=202	1133.73				1
KI=1135.0:	FE=203	1135.03	8.28E-02	3.41E-02	3.01E-03	4
KI=1137.1:	FE=204	1137.16	5.57E-02	2.33E-02	2.05E-03	4
KI=1139.7:	FE=205	1139.70	1.01E-01	4.70E-02	4.13E-03	4
KI=1141.0:	FE=206	1140.98	5.00E-02	2.18E-02	1.91E-03	4
KI=1144.0:	FE=207	1144.05	3.54E-02	1.51E-02	1.32E-03	4
KI=1148.3:	FE=208	1148.32	4.88E-02	2.41E-02	2.10E-03	4
KI=1149.8:	FE=209	1149.78	3.74E-02	1.71E-02	1.49E-03	4
KI=1152.6:	FE=210	1152.61	2.49E-02	1.05E-02	9.13E-04	4
KI=1155.0:	FE=211	1155.02	1.12E-01	4.68E-02	4.05E-03	4
KI=1156.1:	FE=212	1156.11	1.59E-02	7.45E-03	6.44E-04	4
KI=1158.0:	FE=213	1158.06	5.00E-02	2.17E-02	1.87E-03	4
KI=1159.8:	FE=214	1159.87	3.76E-02	2.00E-02	1.72E-03	4
KI=1161.8:	FE=215	1161.81	6.10E-02	2.92E-02	2.51E-03	4
KI=1164.2:	FE=216	1164.19	2.49E-02	1.05E-02	8.99E-04	4
KI=1170.4:	FE=217	1170.37	2.86E-02	1.19E-02	1.02E-03	4
KI=1171.4:	FE=218	1171.44	1.08E-01	4.46E-02	3.81E-03	4
KI=1173.9:	FE=219	1173.92	9.57E-02	4.45E-02	3.78E-03	4
KI=1179.7:	FE=220	1179.69	7.52E-02	3.08E-02	2.61E-03	4
KI=1181.4:	FE=221	1181.45	4.79E-02	2.17E-02	1.84E-03	4
KI=1185.3:	FE=222	1185.39	1.10E-01	4.54E-02	3.83E-03	4
KI=1189.6:	FE=223	1189.63	6.27E-02	2.60E-02	2.19E-03	4
KI=1191.5:	FE=224	1191.58	1.84E-01	8.95E-02	7.51E-03	4
KI=1193.9:	FE=225	1193.97	6.32E-02	2.59E-02	2.17E-03	4
\$1200-n-C12-ANE:	FE=227	1200.00	0.00E+00	0.00E+00	0.00E+00	4
KI=1203.4:	FE=228	1203.42	4.71E-02	2.28E-02	1.89E-03	4
KI=1205.6:	FE=229	1205.61	1.00E-01	4.53E-02	3.76E-03	4
KI=1207.2:	FE=230	1207.16	8.15E-02	5.77E-02	4.78E-03	2
KI=1210.9:	FE=231	1210.93	1.55E-01	6.90E-02	5.70E-03	4
KI=1214.2:	FE=232	1214.16	2.54E-02	1.14E-02	9.35E-04	4
KI=1218.2:	FE=233	1218.19	1.06E-01	4.78E-02	3.92E-03	4
KI=1220.0:	FE=234	1219.87				1
KI=1221.7:	FE=235	1221.72	5.79E-02	2.46E-02	2.01E-03	4
KI=1224.3:	FE=236	1224.34	6.93E-02	2.91E-02	2.38E-03	4
KI=1227.8:	FE=237	1227.87	5.08E-02	2.13E-02	1.74E-03	4
KI=1233.9:	FE=238	1233.89	5.74E-02	2.43E-02	1.97E-03	4
KI=1238.6:	FE=239	1238.63	7.35E-02	3.51E-02	2.84E-03	4
KI=1241.7:	FE=240	1241.74	4.98E-02	2.10E-02	1.69E-03	4
KI=1245.4:	FE=241	1245.42	1.03E-02	4.34E-03	3.49E-04	4
KI=1248.5:	FE=242	1248.48	4.57E-02	2.13E-02	1.70E-03	4
KI=1252.8:	FE=243	1252.81	2.64E-02	1.18E-02	9.43E-04	4
KI=1254.8:	FE=244	1254.88	3.03E-02	1.46E-02	1.16E-03	4

TABLE 6 (Concluded)

KI=1259.3:	FE=245	1259.28	4.10E-02	1.72E-02	1.37E-03	4
KI=1264.0:	FE=246	1264.00	3.83E-02	1.75E-02	1.39E-03	4
KI=1267.6:	FE=247	1267.62	7.84E-02	3.65E-02	2.88E-03	4
KI=1270.2:	FE=248	1270.26	3.39E-02	1.41E-02	1.11E-03	4
KI=1273.1:	FE=249	1273.17	7.32E-02	3.44E-02	2.70E-03	4
KI=1276.1:	FE=250	1276.15	1.56E-01	1.11E-01	8.67E-03	2
KI=1277.5:	FE=251	1277.53	4.66E-02	3.30E-02	2.58E-03	2
KI=1282.7:	FE=253	1282.66	1.01E-01	4.54E-02	2.54E-03	4
KI=1285.6:	FE=254	1285.67	3.42E-02	1.49E-02	1.16E-03	4
KI=1289.3:	FE=255	1289.29	6.52E-02	4.61E-02	3.58E-03	2
KI=1294.2:	FE=256	1294.25	9.03E-02	4.16E-02	3.22E-03	4
\$1300-n-C13-ANE:	FE=257	1300.00	0.00E+00	0.00E+00	0.00E+00	4
KI=1304.4:	FE=258	1304.18				1
KI=1309.6:	FE=259	1309.64	8.62E-02	3.94E-02	3.01E-03	4
KI=1311.5:	FE=260	1311.56	1.61E-01	7.10E-02	5.42E-03	4
KI=1318.0:	FE=262	1317.97	3.66E-02	1.57E-02	1.19E-03	4
KI=1323.1:	FE=263	1323.18	1.66E-01	7.67E-02	5.80E-03	4
KI=1328.0:	FE=264	1328.04	1.45E-01	1.03E-01	7.72E-03	2
KI=1333.4:	FE=265	1333.39	6.62E-02	3.09E-02	2.32E-03	4
KI=1338.4:	FE=266	1338.45	1.18E-01	4.87E-02	3.64E-03	4
KI=1342.2:	FE=267	1342.20	8.13E-02	3.89E-02	2.90E-03	4
KI=1344.5:	FE=268	1344.53	9.79E-02	5.08E-02	3.78E-03	3
KI=1347.5:	FE=269	1347.54	8.62E-02	4.02E-02	2.99E-03	4
KI=1351.1:	FE=270	1351.10	6.40E-02	2.82E-02	2.09E-03	4
KI=1354.0:	FE=271	1354.09	1.05E-01	4.68E-02	3.46E-03	4
KI=1358.9:	FE=272	1358.84	5.22E-02	2.39E-02	1.76E-03	4
KI=1364.0:	FE=273	1363.95	6.35E-02	3.15E-02	2.31E-03	4
KI=1370.3:	FE=274	1370.34	1.09E-01	5.11E-02	3.73E-03	4
KI=1376.7:	FE=275	1376.70	7.54E-02	3.27E-02	2.38E-03	4
KI=1383.0:	FE=276	1383.00	3.78E-02	1.68E-02	1.22E-03	4
KI=1383.6:	FE=277	1388.60	1.88E-01	8.16E-02	5.87E-03	4
KI=1393.4:	FE=278	1393.43	1.33E-01	5.56E-02	3.99E-03	4
\$1400-n-C14-ANE:	FE=279	1400.00	0.00E+00	0.00E+00	0.00E+00	4
KI=1404.0:	FE=280	1403.96	4.76E-02	2.27E-02	1.62E-03	4
KI=1407.9:	FE=281	1407.90	4.35E-02	1.87E-02	1.33E-03	4
KI=1411.1:	FE=282	1411.06	6.59E-02	3.19E-02	2.26E-03	4
KI=1413.6:	FE=283	1413.59	1.12E-01	5.32E-02	3.76E-03	4
KI=1427.2:	FE=286	1427.18	3.98E-02	1.63E-02	1.14E-03	4
KI=1430.3:	FE=287	1430.27	6.47E-02	3.14E-02	2.19E-03	4
KI=1434.1:	FE=288	1434.12	1.16E-01	5.05E-02	3.52E-03	4
KI=1443.2:	FE=289	1443.18	1.85E-01	7.88E-02	5.46E-03	4
KI=1446.1:	FE=290	1446.11	2.01E-01	8.89E-02	6.15E-03	4
KI=1450.5:	FE=291	1450.43				1
KI=1453.4:	FE=292	1453.48	1.64E-01	6.86E-02	4.72E-03	4
KI=1458.7:	FE=293	1458.68	1.43E-01	6.41E-02	4.40E-03	4
KI=1462.7:	FE=294	1462.66	3.52E-02	1.49E-02	1.02E-03	4
KI=1470.7:	FE=295	1470.73	1.56E-01	6.52E-02	4.43E-03	4
\$1500-n-C15-ANE:	FE=296	1500.00	0.00E+00	0.00E+00	0.00E+00	4
\$1600-n-C16-ANE:	FE=297	1600.00	0.00E+00	0.00E+00	0.00E+00	4
\$ANTH-d10(1S) (KI=1772)		1771.71	1.39E-01	6.45E-02	3.64E-03	4
\$2118-(IMPURITY #3)		2119.00	0.00E+00	0.00E+00	0.00E+00	3
TOTAL CONCENTRATION		5000.00	0.00E+00	0.00E+00	0.00E+00	4

TABLE 7. EXAMPLE OF REP3 DATA BASE MANAGEMENT PROGRAM  
OUTPUT FOR ONE FEATURE IN A DATA BASE

HISTOGRAM OF THE DISTRIBUTION OF CONCENTRATION VALUES  
OF COMPOUNDS IN THE 19406 DATA BASE

CONSISTING OF 14 SAMPLES  
CONCENTRATION (mg/ml)

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	%REL STANDARD DEVIATION	NUMBER OF SAMPLES
KI= 712.51	FE=036	1.59E+01	2.51E+00	6.62E-01	4.16E+00	14

LOW VALUE	HIGH VALUE	FREQUENCY	APPROX. RELATIVE FREQUENCY
1.475E+01	1.483E+01	1	*****
1.483E+01	1.490E+01	0	
1.490E+01	1.497E+01	0	
1.497E+01	1.504E+01	0	
1.504E+01	1.511E+01	1	*****
1.511E+01	1.518E+01	1	*****
1.518E+01	1.526E+01	0	
1.526E+01	1.533E+01	0	
1.533E+01	1.540E+01	0	
1.540E+01	1.547E+01	0	
1.547E+01	1.554E+01	1	*****
1.554E+01	1.561E+01	0	
1.561E+01	1.569E+01	1	*****
1.569E+01	1.576E+01	1	*****
1.576E+01	1.583E+01	0	
1.583E+01	1.590E+01	0	
1.590E+01	1.597E+01	1	*****
1.597E+01	1.604E+01	1	*****
1.604E+01	1.612E+01	0	
1.612E+01	1.619E+01	1	*****
1.619E+01	1.626E+01	1	*****
1.626E+01	1.633E+01	0	
1.633E+01	1.640E+01	1	*****
1.640E+01	1.647E+01	1	*****
1.647E+01	1.655E+01	1	*****
1.655E+01	1.662E+01	0	
1.662E+01	1.669E+01	0	
1.669E+01	1.676E+01	0	
1.676E+01	1.683E+01	0	
1.683E+01	1.690E+01	0	
1.690E+01	1.698E+01	0	
1.698E+01	1.705E+01	0	
1.705E+01	1.712E+01	0	
1.712E+01	1.719E+01	0	
1.719E+01	1.726E+01	1	*****

NUMBER OF INTERVALS= 35  
INTERVAL WIDTH= 7.167E-02  
EACH ASTERISK REPRESENTS APPROX. .02 COUNTS

TABLE 8. EXAMPLE OF REP4 DATA BASE MANAGEMENT PROGRAM  
OUTPUT FOR ONE FEATURE IN A DATA BASE

HISTOGRAM OF THE DISTRIBUTION OF KOVAT INDICES  
OF COMPOUNDS IN THE MHO6 DATA BASE

CONSISTING OF 14 SAMPLES  
KOVATS INDEX

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	%REL STANDARD DEVIATION	NUMBER OF SAMPLES
KI= 712.51	FE-036	7.125E+02	5.02E-02	1.36E-02	1.91E-03	14

LOW VALUE	HIGH VALUE	FREQUENCY	APPROX. RELATIVE FREQUENCY
7.125E+02	7.125E+02	1	*****
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	1	*****
7.125E+02	7.125E+02	1	*****
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	1	*****
7.125E+02	7.125E+02	1	*****
7.125E+02	7.125E+02	1	*****
7.125E+02	7.125E+02	1	*****
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	1	*****
7.125E+02	7.125E+02	2	*****
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	1	*****
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	1	*****
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	1	*****
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	0	
7.125E+02	7.125E+02	1	*****

NUMBER OF INTERVALS= 35  
INTERVAL WIDTH= 1.433E-03  
EACH ASTERISK REPRESENTS APPROX. .04 COUNTS

TABLE 9. EXAMPLE OF TOMB DATA BASE MANAGEMENT  
UTILITY PROGRAM OUTPUT

TOMBSTONE  
V3.0

RAW DUMP OF DATA-BASE M411:RH:20

**<FILE USAGE>**

	CURRENT	MAX	REMAINING
SAMPLES	4.	7.	3.
PEAKS	288.	503.	215.
DATA RECORDS	1098.	2003.	905.

**<DATA-BASE CONTENTS>**

SAMPLE: 607JP4ME 01B	607JP4ME 01	607JP4ME 02	607JP4ME 02B
FILE: BKP033	BKP032	BKP034	BKP035
UNITS: mg/ml	mg/ml	mg/ml	mg/ml

\*\*\* UNITS ARE CONSISTENT \*\*\*

**<PEAK NAMES>**

KI= 377.2:	FE=001	KI= 388.0:	FE=002	\$400-n-C4-ANE:	FE=003
KI= 457.6:	FE=004	\$500-n-C5-ANE:	FE=005	KI= 507.0:	FE=006
KI= 514.3:	FE=008	KI= 520.1:	FE=009	CH2CL2 SOLVENT	
KI= 549.7:	FE=010	KI= 552.4:	FE=011	PURITY #1(KI= 558.6)	
KI= 560.4:	FE=012	KI= 577.3:	FE=013	\$600-n-C6-ANE:	FE=014
KI= 609.2:	FE=015	KI= 611.2:	FE=016	KI= 613.9:	FE=017
KI= 624.8:	FE=018	KI= 627.3:	FE=019	KI= 632.4:	FE=020
KI= 653.0:	FE=021	KI= 656.1:	FE=022	KI= 658.2:	FE=023
KI= 669.0:	FE=024	KI= 670.4:	FE=025	PURITY #2(KI= 674.4)	
KI= 677.4:	FE=026	KI= 679.8:	FE=027	KI= 682.0:	FE=028
KI= 684.6:	FE=029	KI= 685.8:	FE=030	\$700-n-C7-ANE:	FE=031
KI= 701.8:	FE=032	KI= 705.0:	FE=033	KI= 706.7:	FE=034
KI= 708.0:	FE=035	KI= 712.5:	FE=036	KI= 715.6:	FE=037
KI= 719.1:	FE=038	KI= 725.8:	FE=039	KI= 730.0:	FE=040
KI= 731.0:	FE=041	KI= 733.6:	FE=042	KI= 735.0:	FE=043
KI= 741.2:	FE=044	KI= 743.3:	FE=045	KI= 745.4:	FE=046
KI= 749.9:	FE=047	KI= 753.9:	FE=048	KI= 757.1:	FE=049
KI= 758.8:	FE=050	KI= 762.0:	FE=051	KI= 765.3:	FE=052
KI= 766.4:	FE=053	KI= 768.8:	FE=054	KI= 770.6:	FE=055
KI= 772.4:	FE=056	KI= 775.2:	FE=057	KI= 781.0:	FE=058
KI= 783.2:	FE=059	KI= 784.4:	FE=060	KI= 785.4:	FE=061
KI= 786.9:	FE=062	KI= 791.1:	FE=063	KI= 794.4:	FE=064
KI= 795.7:	FE=065	\$800-n-C8-ANE:	FE=066	KI= 802.5:	FE=067
KI= 805.7:	FE=068	KI= 807.1:	FE=069	KI= 808.9:	FE=070
KI= 812.3:	FE=071	KI= 813.6:	FE=072	KI= 817.0:	FE=073
KI= 818.2:	FE=074	KI= 821.3:	FE=075	KI= 824.2:	FE=076

TABLE 9 (continued)

KI= 825.71	FE=077	KI= 828.11	FE=078	KI= 834.41	FE=079
KI= 837.01	FE=080	KI= 840.81	FE=081	KI= 842.71	FE=082
KI= 844.21	FE=083	KI= 846.21	FE=084	KI= 848.21	FE=085
KI= 850.91	FE=086	KI= 852.81	FE=087	KI= 854.41	FE=088
KI= 856.11	FE=089	KI= 860.01	FE=090	KI= 862.21	FE=091
KI= 863.81	FE=092	KI= 865.01	FE=093	KI= 867.41	FE=094
KI= 869.51	FE=095	KI= 871.21	FE=096	KI= 873.11	FE=097
KI= 877.11	FE=098	KI= 880.01	FE=099	KI= 881.61	FE=100
KI= 884.51	FE=102	KI= 887.41	FE=103	KI= 890.91	FE=104
KI= 892.61	FE=105	KI= 894.61	FE=106	KI= 895.91	FE=107
KI= 897.61	FE=108	\$900-n-C9-ANE	FE=109	KI= 901.31	FE=110
KI= 908.41	FE=112	KI= 910.81	FE=113	KI= 913.91	FE=114
KI= 915.41	FE=115	KI= 917.71	FE=116	KI= 920.11	FE=117
KI= 922.61	FE=118	KI= 924.71	FE=119	KI= 929.11	FE=120
KI= 933.51	FE=122	KI= 939.41	FE=123	KI= 945.31	FE=125
KI= 947.41	FE=126	KI= 952.01	FE=127	KI= 953.51	FE=128
KI= 955.81	FE=129	KI= 956.81	FE=130	KI= 960.51	FE=131
KI= 962.11	FE=132	KI= 964.71	FE=133	KI= 966.11	FE=134
KI= 967.41	FE=135	KI= 970.81	FE=136	KI= 972.71	FE=137
KI= 974.91	FE=139	KI= 976.91	FE=139	KI= 979.21	FE=140
KI= 981.71	FE=142	KI= 983.31	FE=143	KI= 986.21	FE=144
KI= 989.01	FE=145	KI= 993.51	FE=146	KI= 995.31	FE=147
KI= 996.81	FE=148	\$1000-n-C10-ANE	FE=149	KI=1003.91	FE=150
KI=1009.01	FE=151	KI=1013.91	FE=152	KI=1017.01	FE=153
KI=1020.11	FE=155	KI=1022.91	FE=156	KI=1025.81	FE=157
KI=1028.41	FE=158	KI=1031.61	FE=159	KI=1033.41	FE=160
KI=1034.61	FE=161	KI=1036.61	FE=162	KI=1038.51	FE=163
KI=1040.61	FE=164	KI=1043.21	FE=165	KI=1044.71	FE=166
KI=1046.41	FE=167	KI=1049.41	FE=168	KI=1050.61	FE=169
KI=1053.81	FE=170	KI=1057.91	FE=173	KI=1060.81	FE=174
KI=1064.61	FE=175	KI=1066.21	FE=176	KI=1070.61	FE=177
KI=1072.81	FE=178	KI=1079.01	FE=179	KI=1081.61	FE=180
KI=1084.31	FE=181	KI=1087.21	FE=182	KI=1089.41	FE=183
KI=1090.81	FE=184	KI=1093.81	FE=185	KI=1096.01	FE=186
\$1100-n-C11-ANE	FE=187	KI=1101.71	FE=188	KI=1104.41	FE=189
KI=1106.61	FE=190	KI=1108.41	FE=191	KI=1110.31	FE=192
KI=1112.61	FE=193	KI=1115.81	FE=194	KI=1117.71	FE=195
KI=1119.71	FE=196	KI=1123.41	FE=198	KI=1127.01	FE=199
KI=1129.41	FE=200	KI=1132.71	FE=201	KI=1133.71	FE=202
KI=1135.01	FE=203	KI=1137.11	FE=204	KI=1139.71	FE=205
KI=1141.01	FE=206	KI=1144.01	FE=207	KI=1148.31	FE=208
KI=1149.81	FE=209	KI=1152.61	FE=210	KI=1155.01	FE=211
KI=1156.11	FE=212	KI=1158.01	FE=213	KI=1159.81	FE=214
KI=1161.81	FE=215	KI=1164.21	FE=216	KI=1170.41	FE=217
KI=1171.41	FE=218	KI=1175.91	FE=219	KI=1179.71	FE=220
KI=1181.41	FE=221	KI=1185.31	FE=222	KI=1189.61	FE=223
KI=1191.51	FE=224	KI=1193.91	FE=225	\$1200-n-C12-ANE	FE=227
KI=1203.41	FE=228	KI=1205.61	FE=229	KI=1207.21	FE=230
KI=1210.91	FE=231	KI=1214.21	FE=232	KI=1218.21	FE=233
KI=1220.01	FE=234	KI=1221.71	FE=235	KI=1224.31	FE=236
KI=1227.81	FE=237	KI=1233.91	FE=238	KI=1238.61	FE=239
KI=1241.71	FE=240	KI=1245.41	FE=241	KI=1248.51	FE=242
KI=1252.81	FE=243	KI=1254.81	FE=244	KI=1259.31	FE=245
KI=1264.01	FE=246	KI=1267.61	FE=247	KI=1270.21	FE=248
KI=1273.11	FE=249	KI=1276.11	FE=250	KI=1277.51	FE=251
KI=1282.71	FE=253	KI=1285.61	FE=254	KI=1288.31	FE=255
KI=1294.21	FE=256	\$1300-n-C13-ANE	FE=257	KI=1304.41	FE=258
KI=1309.61	FE=259	KI=1311.51	FE=260	KI=1318.01	FE=262
KI=1323.11	FE=263	KI=1328.01	FE=264	KI=1333.41	FE=265
KI=1338.41	FE=266	KI=1342.21	FE=267	KI=1344.51	FE=268
KI=1347.51	FE=269	KI=1351.11	FE=270	KI=1354.01	FE=271

TABLE 9 (Concluded)

KI=1358.91	FE=272	KI=1364.01	FE=273	KI=1370.31	FE=274
KI=1376.71	FE=275	KI=1383.01	FE=276	KI=1388.61	FE=277
KI=1393.41	FE=278	81400-n-C14-ANE	FE=279	KI=1404.01	FE=280
KI=1407.91	FE=281	KI=1411.11	FE=282	KI=1413.61	FE=283
KI=1427.21	FE=286	KI=1430.31	FE=287	KI=1434.11	FE=288
KI=1443.21	FE=289	KI=1446.11	FE=290	KI=1450.51	FE=291
KI=1453.41	FE=292	KI=1458.71	FE=293	KI=1462.71	FE=294
KI=1470.71	FE=295	81500-n-C15-ANE	FE=296	81600-n-C16-ANE	FE=297
8ANTH-d10(1S) (KI=1772)		82118-(IMPURITY #3)		TOTAL CONCENTRATION	

\*\*\* ALL STD PEAKS HAVE THE SAME AMOUNT \*\*\*

TABLE 10. REP6 OUTPUT FOR DATA BASE CONTAINING BKPxxx FILES OF  
16 REPLICATE ANALYSES OF THE REFERENCE JP-4 FUEL,  
AFTER EXECUTING THE PROGRAM "NAMER"

STATISTICAL SUMMARY OF MHOS DATA BASE

CONSISTING OF 16 SAMPLES  
CONCENTRATION (mg/ml )

COMPOUND NAME	AVERAGE	RANGE	STANDARD DEVIATION	XREL STANDARD DEVIATION	NUMBER OF SAMPLES
Unk (KI= 377)P	5.91E-02	1.32E-01	6.18E-02	1.05E+02	10
Unk (KI= 388)P	2.70E-01	4.58E-01	1.90E-01	7.01E+01	16
8400-(KI= 400)M	6.93E-01	1.12E+00	4.79E-01	6.92E+01	16
Unk (KI= 457)P	4.84E+00	5.76E+00	2.42E+00	5.01E+01	5
Unk (KI= 458)P	3.55E+00	6.09E+00	2.87E+00	8.09E+01	11
8500-(KI= 500)M	2.86E+01	4.41E+01	1.97E+01	6.91E+01	16
Unk (KI= 507)P	1.05E-01	1.82E-01	6.00E-02	5.69E+01	12
Unk (KI= 511)P	8.29E-02	1.20E-01	6.36E-02	7.68E+01	3
Unk (KI= 512)P	1.95E-01				1
Unk (KI= 514)P	9.72E-02	1.99E-01	8.27E-02	8.51E+01	9
Unk (KI= 515)P	1.47E-01	5.42E-02	3.83E-02	2.61E+01	2
Unk (KI= 520)P	5.32E-01	8.85E-01	3.71E-01	6.97E+01	16
CH2CL2 SOLVENT	5.07E-01	8.09E-01	3.57E-01	7.03E+01	16
Unk (KI= 548)P	1.65E+00				1
Unk (KI= 549)P	1.06E+00	1.47E+00	7.97E-01	7.53E+01	3
Unk (KI= 550)P	8.99E-01	1.48E+00	6.76E-01	7.51E+01	12
Unk (KI= 551)P	1.96E+00	5.31E-02	3.76E-02	1.92E+00	2
Unk (KI= 552)P	5.25E-01	1.42E+00	7.09E-01	1.35E+02	4
Unk (KI= 553)P	1.28E+00	1.80E+00	7.76E-01	6.05E+01	10
IMPURITY #1-(KI= 558)	5.95E-01	1.18E+00	4.74E-01	7.98E+01	15
Unk (KI= 559)P	1.17E+01	4.06E-01	2.87E-01	2.44E+00	2
Unk (KI= 560)P	4.81E+00	9.49E+00	5.16E+00	1.07E+02	5
Unk (KI= 561)P	7.20E+00	1.02E+01	4.69E+00	6.51E+01	9
Unk (KI= 576)P	8.29E+00				1
Unk (KI= 577)P	4.29E+00	7.31E+00	3.48E+00	8.10E+01	13
Unk (KI= 578)P	6.99E+00	2.45E-01	1.73E-01	2.48E+00	2
8600-(KI= 600)M	2.57E+01	4.13E+01	1.79E+01	6.98E+01	16
Unk (KI= 609)P	9.35E-02	1.20E-01	4.88E-02	5.22E+01	5
Unk (KI= 611)P	8.83E-02	1.36E-01	5.76E-02	6.52E+01	15
Unk (KI= 614)P	1.32E-01	2.40E-01	9.80E-02	7.41E+01	15
Unk (KI= 625)P	6.38E+00	9.97E+00	4.40E+00	6.90E+01	16
Unk (KI= 627)P	8.38E-02	1.35E-01	5.65E-02	6.74E+01	14
Unk (KI= 632)P	1.31E+00	1.93E+00	8.41E-01	6.44E+01	12
Unk (KI= 633)P	1.03E+00	1.79E+00	9.87E-01	9.58E+01	4
Unk (KI= 653)P	7.06E-01	1.10E+00	4.87E-01	6.90E+01	16
Unk (KI= 656)P	6.05E+00	9.48E+00	4.18E+00	6.91E+01	16
Unk (KI= 659)P	2.72E+00	4.43E+00	1.88E+00	6.93E+01	16
Unk (KI= 669)P	3.54E+00	5.63E+00	2.45E+00	6.92E+01	16
Unk (KI= 670)P	8.25E+00	1.30E+01	5.96E+00	7.22E+01	15
Unk (KI= 671)P	1.46E+01				1
IMPURITY #2-(KI= 674)	6.44E-01	9.47E-01	4.42E-01	6.87E+01	16
Unk (KI= 677)P	9.44E+00	1.51E+01	7.16E+00	7.59E+01	14
Unk (KI= 678)P	1.74E+01	6.37E-01	4.51E-01	2.59E+00	2
Unk (KI= 680)P	1.86E+00	2.90E+00	1.28E+00	6.90E+01	16
Unk (KI= 682)P	1.78E+00	2.78E+00	1.23E+00	6.90E+01	16
Unk (KI= 685)P	3.23E+00	5.06E+00	2.23E+00	6.90E+01	16
Unk (KI= 686)P	1.01E+00	1.57E+00	6.94E-01	6.90E+01	16
8700-(KI= 700)M	2.74E+01	4.32E+01	1.90E+01	6.94E+01	16
Unk (KI= 702)P	1.12E-01	1.75E-01	7.40E-02	6.62E+01	9
Unk (KI= 705)P	7.88E-02	1.27E-01	5.46E-02	6.93E+01	16
Unk (KI= 707)P	6.37E-02	9.69E-02	4.93E-02	7.75E+01	5
Unk (KI= 708)P	1.21E-01	2.10E-01	6.70E-02	7.17E+01	16
Unk (KI= 712)P	1.44E+01	1.89E+01	8.64E+00	5.99E+01	4



TABLE 10 (continued)

Unk (KI= 713)P	1.13E+01	1.81E+01	8.44E+00	7.50E+01	12
Unk (KI= 716)P	1.09E+00	1.71E+00	7.56E-01	6.91E+01	16
Unk (KI= 719)P	7.87E-01	1.23E+00	5.43E-01	6.90E+01	16
Unk (KI= 726)P	1.22E+00	1.92E+00	8.43E-01	6.90E+01	16
Unk (KI= 730)P	1.81E+00	2.84E+00	1.25E+00	6.90E+01	16
Unk (KI= 731)P	3.07E+00	4.82E+00	2.12E+00	6.90E+01	16
Unk (KI= 734)P	1.22E+00	1.91E+00	8.42E-01	6.90E+01	16
Unk (KI= 735)P	1.10E+00	1.73E+00	7.62E-01	6.90E+01	16
Unk (KI= 741)P	1.18E+00	1.85E+00	8.13E-01	6.91E+01	16
Unk (KI= 743)P	3.76E-01	5.95E-01	2.60E-01	6.92E+01	16
Unk (KI= 745)P	3.40E-01	5.62E-01	2.39E-01	7.02E+01	16
Unk (KI= 750)P	9.99E-02	1.53E-01	6.90E-02	6.90E+01	16
Unk (KI= 754)P	4.47E-01	6.81E-01	3.07E-01	6.87E+01	16
Unk (KI= 757)P	3.24E+00	5.09E+00	2.24E+00	6.70E+01	16
Unk (KI= 759)P	6.44E+00	1.01E+01	4.45E+00	6.90E+01	16
Unk (KI= 762)P	2.24E-01	3.36E-01	1.54E-01	6.89E+01	16
Unk (KI= 765)P	1.35E+01	2.13E+01	9.36E+00	6.90E+01	16
Unk (KI= 766)P	5.29E+00	8.24E+00	3.65E+00	6.90E+01	16
Unk (KI= 769)P	3.53E+00	5.53E+00	2.43E+00	6.90E+01	16
Unk (KI= 771)P	1.90E+00	3.00E+00	1.31E+00	6.91E+01	16
Unk (KI= 772)P	1.54E+01	2.41E+01	1.06E+01	6.90E+01	16
Unk (KI= 775)P	6.34E-01	9.91E-01	4.37E-01	6.90E+01	16
Unk (KI= 781)P	8.95E-01	1.34E+00	5.90E-01	6.90E+01	16
Unk (KI= 783)P	5.18E-01	8.16E-01	3.57E-01	6.89E+01	16
Unk (KI= 784)P	9.54E-01	1.47E+00	6.56E-01	6.87E+01	16
Unk (KI= 785)P	1.23E-01	1.61E-01	6.60E-02	5.35E+01	12
Unk (KI= 786)P	1.45E-02				1
Unk (KI= 787)P	1.92E+00	2.99E+00	1.32E+00	6.89E+01	16
Unk (KI= 791)P	6.64E-02	1.16E-01	5.03E-02	7.58E+01	12
Unk (KI= 794)P	4.65E-01	7.30E-01	3.21E-01	6.90E+01	16
Unk (KI= 796)P	1.10E+00	1.74E+00	7.60E-01	6.90E+01	16
8800-(KI= 800)M	2.74E+01	4.33E+01	1.91E+01	6.93E+01	16
Unk (KI= 802)P	5.85E-02	9.06E-02	6.41E-02	1.10E+02	2
Unk (KI= 803)P	6.84E-02	1.12E-01	5.11E-02	7.47E+01	12
Unk (KI= 806)P	1.03E-01	1.46E-01	6.52E-02	6.36E+01	15
Unk (KI= 807)P	1.85E-01	2.87E-01	1.27E-01	6.90E+01	16
Unk (KI= 809)P	7.13E-02	9.96E-02	4.55E-02	6.38E+01	9
Unk (KI= 812)P	4.26E-01	6.68E-01	2.94E-01	6.89E+01	16
Unk (KI= 814)P	2.08E-01	3.20E-01	1.43E-01	6.87E+01	16
Unk (KI= 817)P	6.86E-01	1.09E+00	4.73E-01	6.90E+01	16
Unk (KI= 818)P	6.05E-01	1.01E+00	4.18E-01	6.91E+01	16
Unk (KI= 821)P	1.67E+00	2.68E+00	1.15E+00	6.90E+01	16
Unk (KI= 823)P	2.06E-01				1
Unk (KI= 824)P	2.73E+00	4.74E+00	1.92E+00	7.02E+01	16
Unk (KI= 825)P	3.03E+00	1.49E+01	5.90E+00	1.95E+02	6
Unk (KI= 826)P	5.46E-01	1.22E+00	5.57E-01	1.02E+02	10
Unk (KI= 828)P	4.11E+00	6.91E+00	2.98E+00	7.26E+01	15
Unk (KI= 834)P	4.64E+00	7.56E+00	3.36E+00	7.25E+01	15
Unk (KI= 837)P	1.79E-01	2.87E-01	1.29E-01	7.25E+01	15
Unk (KI= 841)P	1.64E-01	2.54E-01	1.14E-01	6.92E+01	16
Unk (KI= 843)P	1.57E+00	2.46E+00	1.08E+00	6.90E+01	16
Unk (KI= 844)P	4.52E-01	7.04E-01	3.12E-01	6.90E+01	16
Unk (KI= 846)P	1.93E-01	2.97E-01	1.33E-01	6.89E+01	16
Unk (KI= 848)P	9.94E-02	1.51E-01	6.85E-02	6.89E+01	16
Unk (KI= 850)P	9.68E-03				1
Unk (KI= 851)P	6.37E-02	1.20E-01	5.93E-02	9.31E+01	6
Unk (KI= 853)P	1.34E-01	2.01E-01	9.30E-02	6.92E+01	16
Unk (KI= 854)P	3.70E+00	5.49E+00	2.36E+00	6.37E+01	15
Unk (KI= 855)P	4.94E-01				1
Unk (KI= 856)P	1.34E+00	2.10E+00	9.25E-01	6.90E+01	16
Unk (KI= 860)P	8.41E-01	1.31E+00	5.81E-01	6.90E+01	16

TABLE 10 (continued)

Unk (KI= 862)P	6.30E+00	9.94E+00	4.35E+00	6.91E+01	16
Unk (KI= 864)P	4.17E+00	6.52E+00	2.87E+00	6.89E+01	16
Unk (KI= 865)P	4.87E+00	7.63E+00	3.36E+00	6.90E+01	16
Unk (KI= 867)P	2.39E-01	4.34E-01	1.95E-01	8.15E+01	13
Unk (KI= 868)P	4.11E-01	2.16E-02	1.10E-02	2.67E+00	3
Unk (KI= 869)P	1.66E+00	1.13E-01	5.85E-02	3.52E+00	3
Unk (KI= 870)P	9.82E-01	1.78E+00	8.00E-01	8.15E+01	13
Unk (KI= 871)P	5.49E+00	8.60E+00	3.79E+00	6.90E+01	16
Unk (KI= 873)P	2.76E-01	4.47E-01	1.92E-01	6.97E+01	16
Unk (KI= 877)P	3.12E-01	4.88E-01	2.15E-01	6.89E+01	16
Unk (KI= 880)P	2.18E+00	3.43E+00	1.50E+00	6.90E+01	16
Unk (KI= 882)P	8.47E-01	1.35E+00	5.85E-01	6.90E+01	16
Unk (KI= 883)P	9.94E-02	1.36E-01	5.45E-02	5.48E+01	8
Unk (KI= 884)P	2.96E+00	4.23E+00	1.79E+00	6.07E+01	13
Unk (KI= 885)P	1.62E+00	3.68E+00	2.12E+00	1.31E+02	3
Unk (KI= 887)P	2.27E-01	3.56E-01	1.59E-01	7.02E+01	16
Unk (KI= 891)P	2.06E-01	3.11E-01	1.42E-01	6.90E+01	16
Unk (KI= 892)P	1.74E-02	4.31E-04	3.05E-04	1.75E+00	2
Unk (KI= 893)P	1.36E-01	1.88E-01	7.94E-02	5.85E+01	14
Unk (KI= 894)P	5.18E-01	5.68E-02	4.02E-02	7.76E+00	2
Unk (KI= 895)P	2.98E-01	4.90E-01	2.27E-01	7.62E+01	14
Unk (KI= 896)P	3.21E-01	5.09E-01	2.22E-01	6.92E+01	16
Unk (KI= 898)P	6.27E-01	9.80E-01	4.32E-01	6.89E+01	16
8900-(KI= 900)M	2.55E+01	4.14E+01	1.78E+01	6.98E+01	16
Unk (KI= 901)P	8.44E-02	1.68E-01	8.42E-02	9.97E+01	7
Unk (KI= 906)P	6.15E-02	1.04E-01	7.39E-02	1.20E+02	2
Unk (KI= 908)P	8.88E-01	1.45E+00	6.14E-01	6.92E+01	16
Unk (KI= 911)P	5.52E-01	9.63E-01	3.89E-01	7.05E+01	16
Unk (KI= 914)P	3.25E-01	6.18E-01	2.42E-01	7.46E+01	16
Unk (KI= 915)P	2.37E-01	4.42E-01	1.73E-01	7.29E+01	16
Unk (KI= 918)P	1.08E+00	2.13E+00	9.01E-01	8.38E+01	16
Unk (KI= 919)P	5.43E-01	7.20E-01	3.93E-01	7.23E+01	3
Unk (KI= 920)P	3.67E-01	6.30E-01	2.60E-01	7.07E+01	16
Unk (KI= 923)P	1.65E+00	2.57E+00	1.14E+00	6.91E+01	16
Unk (KI= 925)P	9.15E-01	1.42E+00	6.32E-01	6.91E+01	16
Unk (KI= 928)P	2.16E-01				1
Unk (KI= 929)P	1.35E+00	2.16E+00	9.32E-01	6.91E+01	16
Unk (KI= 932)P	6.76E-02	1.52E-01	8.70E-02	1.29E+02	3
Unk (KI= 933)P	2.98E+00	4.79E+00	2.03E+00	6.79E+01	14
Unk (KI= 934)P	2.38E+00	3.94E+00	2.78E+00	1.17E+02	2
Unk (KI= 939)P	1.95E+00	3.13E+00	1.36E+00	7.00E+01	16
Unk (KI= 941)P	4.81E-01	1.01E-01	5.06E-02	1.05E+01	3
Unk (KI= 942)P	1.56E-01				1
Unk (KI= 945)P	1.03E+00	1.69E+00	7.18E-01	6.94E+01	16
Unk (KI= 947)P	9.59E-01	1.54E+00	6.63E-01	6.92E+01	16
Unk (KI= 952)P	6.35E-01	1.01E+00	4.39E-01	6.92E+01	16
Unk (KI= 953)P	1.26E+00	1.80E+00	7.60E-01	6.05E+01	10
Unk (KI= 954)P	9.32E-01	1.70E+00	8.52E-01	9.14E+01	6
Unk (KI= 956)P	3.21E+00	5.56E+00	2.25E+00	7.01E+01	16
Unk (KI= 957)P	1.07E+00	1.77E+00	7.82E-01	7.30E+01	15
Unk (KI= 960)P	7.09E-01	1.22E+00	5.00E-01	7.05E+01	16
Unk (KI= 962)P	3.54E+00	5.80E+00	2.46E+00	6.95E+01	16
Unk (KI= 965)P	1.98E+00	3.47E+00	1.42E+00	7.16E+01	16
Unk (KI= 966)P	2.52E-01	4.31E-01	1.83E-01	7.26E+01	8
Unk (KI= 967)P	8.29E-01	1.83E+00	6.96E-01	8.41E+01	16
Unk (KI= 971)P	1.78E+00	2.85E+00	1.23E+00	6.91E+01	16
Unk (KI= 973)P	1.18E+00	1.93E+00	8.19E-01	6.92E+01	16
Unk (KI= 975)P	9.86E-02	1.97E-01	7.71E-02	7.82E+01	15
Unk (KI= 977)P	1.12E+00	1.83E+00	7.76E-01	6.92E+01	16
Unk (KI= 979)P	8.85E-01	1.50E+00	6.11E-01	6.91E+01	16
Unk (KI= 980)P	4.11E-01	1.05E-01	4.26E-02	1.04E+01	5

TABLE 10 (continued)

Unk (KI= 982)P	4.04E-01	6.66E-01	2.81E-01	6.95E+01	16
Unk (KI= 983)P	1.69E-01	3.05E-01	1.19E-01	7.05E+01	16
Unk (KI= 986)P	5.42E+00	8.62E+00	3.74E+00	6.90E+01	16
Unk (KI= 989)P	6.28E-01	1.06E+00	4.35E-01	6.93E+01	16
Unk (KI= 991)P	1.51E-01				1
Unk (KI= 992)P	1.93E-01				1
Unk (KI= 993)P	6.99E-01	1.21E+00	5.58E-01	7.99E+01	5
Unk (KI= 994)P	5.76E-01	1.01E+00	4.26E-01	7.40E+01	11
Unk (KI= 995)P	1.83E-01	3.73E-01	1.42E-01	7.80E+01	16
Unk (KI= 997)P	1.76E-01	3.35E-01	1.30E-01	7.36E+01	14
Unk (KI= 998)P	1.32E-01				1
\$1000-(KI= 1000)M	2.49E+01	4.12E+01	1.74E+01	6.99E+01	16
Unk (KI= 1004)P	5.17E-01	8.57E-01	3.57E-01	6.91E+01	16
Unk (KI= 1009)P	1.18E-01	4.89E-01	1.54E-01	1.30E+02	9
Unk (KI= 1012)P	1.07E-01				1
Unk (KI= 1014)P	2.76E+00	4.46E+00	1.91E+00	6.94E+01	16
Unk (KI= 1017)P	1.02E+00	1.63E+00	7.10E-01	6.96E+01	16
Unk (KI= 1019)P	4.56E-01	5.24E-01	2.27E-01	4.97E+01	5
Unk (KI= 1020)P	6.76E-01	1.18E+00	4.82E-01	7.13E+01	16
Unk (KI= 1023)P	2.23E+00	3.51E+00	1.54E+00	6.91E+01	16
Unk (KI= 1026)P	1.62E+00	2.57E+00	1.12E+00	6.91E+01	16
Unk (KI= 1028)P	1.05E+00	1.74E+00	7.37E-01	7.00E+01	16
Unk (KI= 1032)P	6.60E-01	1.16E+00	4.75E-01	7.20E+01	16
Unk (KI= 1033)P	2.69E-01	4.31E-01	1.84E-01	6.85E+01	14
Unk (KI= 1035)P	5.31E-01	9.71E-01	4.01E-01	7.55E+01	16
Unk (KI= 1036)P	2.53E-01	4.23E-01	2.99E-01	1.18E+02	2
Unk (KI= 1037)P	2.35E-01	4.48E-01	1.75E-01	7.48E+01	14
Unk (KI= 1038)P	7.20E-01	1.01E+00	3.77E-01	5.24E+01	9
Unk (KI= 1039)P	4.33E-01	9.98E-01	4.55E-01	1.05E+02	7
Unk (KI= 1041)P	1.39E-01	2.87E-01	1.20E-01	8.67E+01	15
Unk (KI= 1043)P	1.04E+00	1.80E+00	7.36E-01	7.11E+01	16
Unk (KI= 1045)P	3.89E-01	6.90E-01	2.80E-01	7.20E+01	16
Unk (KI= 1046)P	1.63E+00	2.74E+00	1.15E+00	7.06E+01	16
Unk (KI= 1049)P	6.23E-01	1.10E+00	4.52E-01	7.26E+01	16
Unk (KI= 1051)P	1.00E+00	1.80E+00	7.30E-01	7.29E+01	16
Unk (KI= 1054)P	1.34E+00	2.43E+00	9.76E-01	7.27E+01	16
Unk (KI= 1055)P	3.11E-01	4.16E-01	1.42E-01	4.55E+01	6
Unk (KI= 1056)P	1.94E-01	3.80E-02	1.62E-02	8.34E+00	4
Unk (KI= 1058)P	1.09E+00	1.90E+00	7.83E-01	7.16E+01	16
Unk (KI= 1061)P	1.64E+00	2.65E+00	1.14E+00	6.94E+01	16
Unk (KI= 1065)P	1.88E+00	2.96E+00	1.30E+00	6.90E+01	16
Unk (KI= 1066)P	4.65E-01	7.32E-01	3.21E-01	6.91E+01	16
Unk (KI= 1071)P	2.46E+00	3.89E+00	1.70E+00	6.90E+01	16
Unk (KI= 1073)P	1.38E+00	2.14E+00	9.51E-01	6.90E+01	16
Unk (KI= 1079)P	2.35E+00	3.64E+00	1.62E+00	6.89E+01	16
Unk (KI= 1081)P	1.06E+00				1
Unk (KI= 1082)P	6.00E-01	9.69E-01	4.33E-01	7.21E+01	15
Unk (KI= 1084)P	7.37E-01	1.17E+00	5.09E-01	6.91E+01	16
Unk (KI= 1087)P	4.52E-01	7.54E-01	3.13E-01	6.92E+01	16
Unk (KI= 1089)P	3.41E-01	5.98E-01	2.49E-01	7.30E+01	15
Unk (KI= 1090)P	5.04E-01				1
Unk (KI= 1091)P	3.87E-01	6.69E-01	2.69E-01	6.94E+01	16
Unk (KI= 1094)P	1.93E-01	3.80E-01	1.37E-01	7.07E+01	16
Unk (KI= 1096)P	7.02E-01	1.20E+00	4.86E-01	6.93E+01	16
\$1100-(KI= 1100)M	2.54E+01	4.20E+01	1.78E+01	6.99E+01	16
Unk (KI= 1102)P	1.18E-01	2.10E-01	1.01E-01	8.63E+01	10
Unk (KI= 1104)P	4.23E-01	7.67E-01	2.53E-01	5.98E+01	14
Unk (KI= 1105)P	4.80E-02	1.94E-03	1.37E-03	2.85E+00	2
Unk (KI= 1106)P	1.19E-02				1
Unk (KI= 1107)P	8.63E-02	1.86E-01	6.73E-02	7.80E+01	8
Unk (KI= 1108)P	7.56E-01	1.50E+00	5.48E-01	7.24E+01	16

TABLE 10 (continued)

Jnk (KI= 1110)P	1.94E-01	3.88E-01	1.53E-01	7.87E+01	14
Jnk (KI= 1111)P	2.31E-01				1
Jnk (KI= 1113)P	1.44E+00	2.59E+00	1.02E+00	7.07E+01	16
Jnk (KI= 1116)P	1.27E+00	2.29E+00	8.91E-01	7.01E+01	16
Jnk (KI= 1118)P	5.93E-01	1.12E+00	4.18E-01	7.04E+01	16
Jnk (KI= 1120)P	1.06E-01	3.39E-01	9.20E-02	8.68E+01	16
Jnk (KI= 1122)P	5.71E-02	8.65E-02	6.11E-02	1.07E+02	2
Jnk (KI= 1123)P	2.72E-01	7.85E-01	2.28E-01	8.41E+01	16
Jnk (KI= 1127)P	8.55E-01	1.48E+00	5.97E-01	6.98E+01	16
Jnk (KI= 1129)P	1.27E+00	2.43E+00	9.54E-01	7.48E+01	15
Jnk (KI= 1130)P	2.17E+00				1
Jnk (KI= 1133)P	2.63E-01	6.97E-01	2.65E-01	1.01E+02	15
Jnk (KI= 1134)P	1.73E-01	2.18E-01	1.04E-01	5.97E+01	4
Jnk (KI= 1135)P	3.06E-01	8.05E-01	2.85E-01	9.31E+01	16
Jnk (KI= 1137)P	2.13E-01	5.51E-01	1.92E-01	9.03E+01	16
Jnk (KI= 1140)P	7.90E-01	1.62E+00	6.12E-01	7.74E+01	16
Jnk (KI= 1141)P	6.25E-01	1.16E+00	4.63E-01	7.41E+01	16
Jnk (KI= 1144)P	1.19E+00	2.13E+00	8.37E-01	7.02E+01	16
Jnk (KI= 1148)P	5.93E-01	1.09E+00	4.17E-01	7.03E+01	16
Jnk (KI= 1150)P	2.65E-01	4.64E-01	1.86E-01	7.03E+01	16
Jnk (KI= 1152)P	1.87E+00				1
Jnk (KI= 1153)P	9.40E-01	1.47E+00	6.79E-01	7.22E+01	15
Jnk (KI= 1155)P	5.33E-01	9.43E-01	3.90E-01	7.32E+01	15
Jnk (KI= 1156)P	1.22E+00	2.41E+00	8.71E-01	7.16E+01	16
Jnk (KI= 1158)P	1.60E-01	3.43E-01	1.16E-01	7.24E+01	16
Jnk (KI= 1160)P	1.12E+00	1.90E+00	7.80E-01	6.94E+01	16
Jnk (KI= 1162)P	2.98E-01	5.98E-01	2.13E-01	7.15E+01	16
Jnk (KI= 1164)P	2.09E+00	3.55E+00	1.45E+00	6.94E+01	16
Jnk (KI= 1166)P	9.12E-03				1
Jnk (KI= 1170)P	2.04E+00	3.80E+00	1.46E+00	7.10E+01	16
Jnk (KI= 1171)P	9.82E-01	1.71E+00	7.13E-01	7.27E+01	15
Jnk (KI= 1176)P	3.29E-01	9.02E-01	2.86E-01	8.68E+01	16
Jnk (KI= 1177)P	8.67E-02	1.48E-01	7.41E-02	8.55E+01	3
Jnk (KI= 1180)P	5.07E-01	9.86E-01	3.63E-01	7.16E+01	16
Jnk (KI= 1181)P	6.57E-01	1.23E+00	4.62E-01	7.03E+01	16
Jnk (KI= 1185)P	1.51E+00	2.72E+00	1.06E+00	6.99E+01	16
Jnk (KI= 1189)P	3.69E-01				1
Jnk (KI= 1190)P	7.33E-01	1.31E+00	5.16E-01	7.04E+01	16
Jnk (KI= 1191)P	6.13E-01	8.74E-01	4.35E-01	7.09E+01	8
Jnk (KI= 1192)P	6.45E-01	1.14E+00	4.73E-01	7.34E+01	8
Jnk (KI= 1194)P	7.86E-01	1.54E+00	5.65E-01	7.19E+01	16
Jnk (KI= 1195)P	2.53E-01	4.32E-01	3.06E-01	1.21E+02	2
Jnk (KI= 1196)P	2.87E-01	2.82E-02	2.04E-02	7.09E+00	2
1200-(KI= 1200)M	2.48E+01	4.07E+01	1.73E+01	6.99E+01	16
Jnk (KI= 1202)P	1.25E-01				1
Jnk (KI= 1203)P	3.53E-01	7.73E-01	2.61E-01	7.39E+01	16
Jnk (KI= 1205)P	5.95E-01				1
Jnk (KI= 1206)P	2.46E-01	6.11E-01	2.08E-01	8.45E+01	15
Jnk (KI= 1207)P	7.72E-02	1.65E-01	7.86E-02	1.02E+02	4
Jnk (KI= 1208)P	1.28E-01				1
Jnk (KI= 1211)P	5.72E-01	1.27E+00	4.35E-01	7.60E+01	16
Jnk (KI= 1214)P	3.03E+00	5.11E+00	2.11E+00	6.98E+01	16
Jnk (KI= 1218)P	3.19E-01	8.12E-01	2.80E-01	8.78E+01	16
Jnk (KI= 1220)P	2.63E-01	4.44E-01	1.72E-01	6.52E+01	7
Jnk (KI= 1222)P	3.14E-01	6.69E-01	2.51E-01	8.00E+01	16
Jnk (KI= 1224)P	2.43E-01	4.50E-01	1.73E-01	7.12E+01	16
Jnk (KI= 1228)P	7.35E-01	1.20E+00	5.10E-01	6.94E+01	16
Jnk (KI= 1234)P	1.45E+00	2.30E+00	1.01E+00	6.97E+01	16
Jnk (KI= 1237)P	1.13E-01				1
Jnk (KI= 1239)P	8.53E-01	1.30E+00	5.88E-01	6.90E+01	16
Jnk (KI= 1242)P	4.10E-01	6.81E-01	2.86E-01	6.96E+01	16

TABLE 10 (continued)

Unk (KI= 1245)P	3.42E-01	5.51E-01	2.18E-01	6.37E+01	15
Unk (KI= 1246)P	4.65E-02				1
Unk (KI= 1248)P	5.58E-01	8.78E-01	4.11E-01	7.36E+01	10
Unk (KI= 1249)P	6.35E-01	9.83E-01	4.33E-01	6.83E+01	6
Unk (KI= 1250)P	1.30E-01	2.26E-01	1.59E-01	1.23E+02	2
Unk (KI= 1253)P	8.46E-01	1.31E+00	5.83E-01	6.89E+01	16
Unk (KI= 1255)P	1.27E+00	1.98E+00	8.77E-01	6.89E+01	16
Unk (KI= 1259)P	9.71E-01	1.52E+00	6.71E-01	6.91E+01	16
Unk (KI= 1264)P	1.29E+00	2.01E+00	8.90E-01	6.91E+01	16
Unk (KI= 1267)P	5.07E-01	7.00E-01	3.79E-01	7.48E+01	3
Unk (KI= 1268)P	4.43E-01	7.60E-01	3.16E-01	7.13E+01	13
Unk (KI= 1270)P	8.67E-01	1.37E+00	5.99E-01	6.91E+01	16
Unk (KI= 1273)P	2.63E+00	4.09E+00	1.81E+00	6.90E+01	16
Unk (KI= 1276)P	1.14E-01	1.81E-01	8.28E-02	7.28E+01	8
Unk (KI= 1277)P	1.52E-01				1
Unk (KI= 1278)P	1.41E-01	2.83E-01	1.14E-01	8.06E+01	8
Unk (KI= 1280)P	1.93E-01	1.86E-01	1.31E-01	6.80E+01	2
Unk (KI= 1283)P	1.47E+00	2.36E+00	1.02E+00	6.94E+01	16
Unk (KI= 1286)P	2.70E-01	5.49E-01	1.97E-01	7.32E+01	16
Unk (KI= 1288)P	1.52E-01	3.04E-01	1.08E-01	7.12E+01	5
Unk (KI= 1290)P	1.67E-01				1
Unk (KI= 1291)P	2.66E-01				1
Unk (KI= 1294)P	3.12E-01	6.50E-01	2.25E-01	7.20E+01	16
\$1300-(KI= 1300)M	2.43E+01	3.96E+01	1.70E+01	7.00E+01	16
Unk (KI= 1304)P	9.06E-02	1.52E-01	7.15E-02	7.89E+01	4
Unk (KI= 1305)P	1.82E-01				1
Unk (KI= 1310)P	4.69E-01	7.29E-01	3.26E-01	6.95E+01	16
Unk (KI= 1311)P	3.75E-01	4.28E-01	1.68E-01	4.49E+01	5
Unk (KI= 1312)P	3.83E-01	7.24E-01	3.28E-01	8.56E+01	11
Unk (KI= 1316)P	3.81E-01	5.17E-01	2.41E-01	6.33E+01	5
Unk (KI= 1318)P	9.22E-01	1.83E+00	6.71E-01	7.27E+01	16
Unk (KI= 1320)P	2.45E-01	4.63E-02	3.28E-02	1.34E+01	2
Unk (KI= 1323)P	2.86E-01	5.50E-01	2.28E-01	7.99E+01	15
Unk (KI= 1328)P	2.02E-01	6.92E-01	2.60E-01	1.29E+02	10
Unk (KI= 1333)P	2.77E-01	5.62E-01	2.10E-01	7.56E+01	13
Unk (KI= 1334)P	2.76E-01	4.19E-01	1.91E-01	6.90E+01	4
Unk (KI= 1336)P	2.06E-01				1
Unk (KI= 1338)P	4.98E-01	1.04E+00	3.92E-01	7.86E+01	13
Unk (KI= 1339)P	4.14E-01	4.58E-01	2.64E-01	6.38E+01	3
Unk (KI= 1342)P	1.66E-01	3.86E-01	1.21E-01	7.30E+01	16
Unk (KI= 1344)P	9.40E-02	1.44E-01	7.42E-02	7.89E+01	3
Unk (KI= 1345)P	3.85E-02	1.06E-01	5.19E-02	1.35E+02	4
Unk (KI= 1347)P	1.35E-01	2.31E-01	1.09E-01	8.06E+01	5
Unk (KI= 1348)P	1.01E-01	1.73E-01	7.04E-02	6.95E+01	11
Unk (KI= 1351)P	5.39E-01	9.13E-01	3.75E-01	6.95E+01	16
Unk (KI= 1354)P	2.84E-01	4.47E-01	1.95E-01	6.88E+01	16
Unk (KI= 1359)P	5.15E-01	8.10E-01	3.53E-01	6.87E+01	16
Unk (KI= 1364)P	8.75E-01	1.38E+00	5.97E-01	6.82E+01	16
Unk (KI= 1367)P	1.16E-01				1
Unk (KI= 1370)P	4.89E-01	7.57E-01	3.35E-01	6.85E+01	16
Unk (KI= 1377)P	1.36E+00	2.07E+00	9.36E-01	6.90E+01	16
Unk (KI= 1383)P	2.73E-01	4.22E-01	1.89E-01	6.94E+01	16
Unk (KI= 1388)P	3.63E-01				1
Unk (KI= 1389)P	2.04E-01	3.42E-01	1.48E-01	7.25E+01	15
Unk (KI= 1393)P	8.15E-01	1.36E+00	6.23E-01	7.65E+01	14
Unk (KI= 1394)P	1.37E+00	1.39E-01	9.80E-02	7.13E+00	2
\$1400-(KI= 1400)M	2.33E+01	3.78E+01	1.63E+01	7.01E+01	16
Unk (KI= 1404)P	1.93E-01	2.94E-01	1.33E-01	6.91E+01	16
Unk (KI= 1408)P	5.97E-01	9.77E-01	4.15E-01	6.95E+01	16
Unk (KI= 1411)P	5.37E-01	9.52E-01	3.81E-01	7.09E+01	16
Unk (KI= 1413)P	2.16E-01	2.11E-01	1.49E-01	6.91E+01	2

TABLE 10 (Concluded)

Unk (KI= 1414)P	1.02E-01	2.99E-01	9.57E-02	9.39E+01	14
Unk (KI= 1416)P	2.02E-01	1.42E-01	7.48E-02	3.69E+01	3
Unk (KI= 1417)P	1.83E-01				1
Unk (KI= 1418)P	1.59E-01				1
Unk (KI= 1422)P	7.93E-02	1.08E-01	4.39E-02	5.54E+01	8
Unk (KI= 1425)P	6.30E-02	1.06E-01	7.47E-02	1.19E+02	2
Unk (KI= 1427)P	2.17E-01	4.34E-01	1.55E-01	7.15E+01	16
Unk (KI= 1430)P	9.50E-02	1.51E-01	6.50E-02	6.85E+01	16
Unk (KI= 1434)P	7.07E-02	1.18E-01	5.02E-02	7.11E+01	15
Unk (KI= 1443)P	2.01E-01	3.40E-01	1.39E-01	6.94E+01	16
Unk (KI= 1446)P	9.68E-02	1.72E-01	6.84E-02	7.06E+01	16
Unk (KI= 1449)P	1.23E-01	1.87E-03	1.32E-03	1.08E+00	2
Unk (KI= 1450)P	1.17E-01	1.87E-01	7.44E-02	8.06E+01	3
Unk (KI= 1451)P	1.20E-01	1.79E-01	1.27E-01	1.06E+02	2
Unk (KI= 1453)P	1.37E-01	2.48E-01	1.14E-01	8.31E+01	9
Unk (KI= 1454)P	1.54E-01	2.33E-01	9.30E-02	6.05E+01	7
Unk (KI= 1459)P	2.12E-01	3.58E-01	1.51E-01	7.10E+01	16
Unk (KI= 1463)P	9.33E-01	1.46E+00	6.46E-01	6.93E+01	16
Unk (KI= 1471)P	1.93E-01	3.08E-01	1.34E-01	6.93E+01	16
Unk (KI= 1494)P	1.64E-01				1
\$1500-(KI= 1500)M	2.26E+01	3.65E+01	1.59E+01	7.03E+01	16
Unk (KI= 1515)P	9.23E-03				1
Unk (KI= 1516)P	1.24E-01				1
Unk (KI= 1520)P	8.10E-02	9.30E-02	3.99E-02	4.92E+01	5
\$1600-(KI= 1600)M	2.25E+01	3.70E+01	1.59E+01	7.06E+01	16
&ANTH-D10(1S)(KI=1767)	6.63E+00	9.00E+00	4.50E+00	6.79E+01	16
\$2118-(IMPURITY #3)M	6.75E-01	1.09E+00	4.74E-01	7.03E+01	16
TOTAL CONCENTRATION	6.42E+02	1.03E+03	4.46E+02	6.94E+01	16

TABLE 11. REP7 OUTPUT FOR DATA BASE CONTAINING BKPxxx FILES OF  
16 REPLICATE ANALYSES OF THE REFERENCE JP-4 FUEL,  
AFTER EXECUTING THE PROGRAM "NAMES"

STATISTICAL SUMMARY OF MH05 DATA BASE

CONSISTING OF 16 SAMPLES  
RETENTION INDEX (KI)

COMPOUND NAME	AVERAGE	RANGE	STANDARD DEVIATION	XREL STANDARD DEVIATION	NUMBER OF SAMPLES
Unk (KI= 377)P	377.24	1.34E-01	4.25E-02	1.13E-02	10
Unk (KI= 388)P	387.99	1.51E-01	3.91E-02	1.01E-02	16
\$400-(KI= 400)M	400.00	0.00E+00	0.00E+00	0.00E+00	16
Unk (KI= 457)P	457.40	2.03E-01	9.09E-02	1.99E-02	5
Unk (KI= 458)P	457.62	1.69E-01	4.80E-02	1.05E-02	11
\$500-(KI= 500)M	500.00	0.00E+00	0.00E+00	0.00E+00	16
Unk (KI= 507)P	507.02	2.86E-01	9.73E-02	1.92E-02	12
Unk (KI= 511)P	511.06	9.41E-02	4.80E-02	9.38E-03	3
Unk (KI= 512)P	511.74				1
Unk (KI= 514)P	514.27	5.66E-01	1.82E-01	3.53E-02	9
Unk (KI= 515)P	514.56	4.11E-02	2.91E-02	5.65E-03	2
Unk (KI= 520)P	520.01	6.95E-01	1.97E-01	3.79E-02	16
CH2CL2 SOLVENT	525.82	2.25E+00	5.88E-01	1.12E-01	16
Unk (KI= 548)P	548.40				1
Unk (KI= 549)P	549.19	6.90E-01	3.69E-01	6.71E-02	3
Unk (KI= 550)P	549.79	3.02E-01	9.76E-02	1.78E-02	12
Unk (KI= 551)P	551.17	3.66E-01	2.59E-01	4.69E-02	2
Unk (KI= 552)P	552.36	4.07E-01	1.92E-01	3.47E-02	4
Unk (KI= 553)P	552.57	1.58E-01	6.50E-02	1.18E-02	10
IMPURITY #1-(KI= 558)	558.61	1.93E+00	5.52E-01	9.88E-02	15
Unk (KI= 559)P	559.13	7.05E-01	4.98E-01	8.91E-02	2
Unk (KI= 560)P	560.32	1.66E-01	6.04E-02	1.08E-02	5
Unk (KI= 561)P	560.72	4.49E-01	1.24E-01	2.20E-02	9
Unk (KI= 576)P	575.96				1
Unk (KI= 577)P	577.29	8.07E-01	2.34E-01	4.05E-02	13
Unk (KI= 578)P	577.58	5.88E-02	4.16E-02	7.20E-03	2
\$600-(KI= 600)M	600.00	0.00E+00	0.00E+00	0.00E+00	16
Unk (KI= 609)P	609.25	1.88E-01	7.46E-02	1.22E-02	5
Unk (KI= 611)P	611.18	4.64E-01	1.15E-01	1.88E-02	15
Unk (KI= 614)P	613.92	4.87E-01	1.22E-01	1.98E-02	15
Unk (KI= 625)P	624.84	3.47E-01	7.40E-02	1.18E-02	16
Unk (KI= 627)P	627.28	3.64E-01	9.55E-02	1.52E-02	14
Unk (KI= 632)P	632.42	1.64E-01	4.56E-02	7.21E-03	12
Unk (KI= 633)P	632.56	1.56E-01	7.19E-02	1.14E-02	4
Unk (KI= 653)P	652.95	3.75E-01	9.61E-02	1.47E-02	16
Unk (KI= 656)P	656.10	3.85E-01	1.04E-01	1.58E-02	16
Unk (KI= 659)P	658.85	3.89E-01	1.03E-01	1.56E-02	16
Unk (KI= 669)P	669.04	3.17E-01	8.51E-02	1.27E-02	16
Unk (KI= 670)P	670.35	2.53E-01	6.99E-02	1.04E-02	15
Unk (KI= 671)P	670.60				1
IMPURITY #2-(KI= 674)	674.43	2.73E-01	7.71E-02	1.14E-02	16
Unk (KI= 677)P	677.40	1.80E-01	5.04E-02	7.45E-03	14
Unk (KI= 678)P	677.63	5.74E-02	4.06E-02	5.99E-03	2
Unk (KI= 680)P	679.79	2.60E-01	7.54E-02	1.11E-02	16
Unk (KI= 682)P	682.02	2.29E-01	7.04E-02	1.03E-02	16
Unk (KI= 685)P	684.61	2.18E-01	6.27E-02	9.16E-03	16
Unk (KI= 686)P	685.79	2.57E-01	6.81E-02	9.93E-03	16
\$700-(KI= 700)M	700.00	0.00E+00	0.00E+00	0.00E+00	16
Unk (KI= 702)P	701.81	2.14E-01	6.41E-02	9.13E-03	9
Unk (KI= 705)P	705.00	1.35E-01	3.67E-02	5.20E-03	16
Unk (KI= 707)P	706.66	1.45E-01	6.83E-02	9.66E-03	5
Unk (KI= 708)P	708.05	2.07E-01	5.96E-02	8.42E-03	16
Unk (KI= 712)P	712.48	5.73E-02	2.70E-02	3.78E-03	4

TABLE 11 (continued)

Unk (KI= 713)P	712.51	2.89E-02	9.37E-03	1.32E-03	12
Unk (KI= 716)P	715.64	8.14E-02	1.88E-02	2.62E-03	16
Unk (KI= 719)P	719.12	6.19E-02	1.74E-02	2.41E-03	16
Unk (KI= 726)P	725.80	8.17E-02	2.48E-02	3.41E-03	16
Unk (KI= 730)P	730.04	7.39E-02	2.00E-02	2.74E-03	16
Unk (KI= 731)P	730.97	6.05E-02	1.64E-02	2.25E-03	16
Unk (KI= 734)P	733.62	4.59E-02	1.58E-02	2.15E-03	16
Unk (KI= 735)P	735.04	6.47E-02	1.92E-02	2.61E-03	16
Unk (KI= 741)P	741.25	8.81E-02	2.56E-02	3.45E-03	16
Unk (KI= 743)P	743.31	8.56E-02	2.61E-02	3.52E-03	16
Unk (KI= 745)P	745.39	1.12E-01	2.67E-02	3.58E-03	16
Unk (KI= 750)P	749.92	1.35E-01	3.88E-02	5.17E-03	16
Unk (KI= 754)P	753.88	7.82E-02	2.27E-02	3.01E-03	16
Unk (KI= 757)P	757.14	6.79E-02	1.90E-02	2.51E-03	16
Unk (KI= 759)P	758.78	7.32E-02	2.21E-02	2.92E-03	16
Unk (KI= 762)P	761.98	7.62E-02	2.31E-02	3.03E-03	16
Unk (KI= 765)P	765.27	4.58E-02	1.43E-02	1.86E-03	16
Unk (KI= 766)P	766.36	7.34E-02	1.85E-02	2.41E-03	16
Unk (KI= 769)P	768.85	7.21E-02	1.92E-02	2.30E-03	16
Unk (KI= 771)P	770.62	7.25E-02	2.28E-02	2.96E-03	16
Unk (KI= 772)P	772.37	6.43E-02	1.78E-02	2.30E-03	16
Unk (KI= 775)P	775.21	9.03E-02	2.43E-02	3.14E-03	16
Unk (KI= 781)P	781.03	7.17E-02	2.01E-02	2.57E-03	16
Unk (KI= 783)P	783.15	9.48E-02	2.54E-02	3.24E-03	16
Unk (KI= 784)P	784.36	1.14E-01	3.01E-02	3.84E-03	16
Unk (KI= 785)P	785.45	1.17E-01	3.38E-02	4.30E-03	12
Unk (KI= 786)P	785.51				1
Unk (KI= 787)P	786.90	9.77E-02	2.54E-02	3.22E-03	16
Unk (KI= 791)P	791.07	1.26E-01	4.25E-02	5.38E-03	12
Unk (KI= 794)P	794.45	1.14E-01	2.98E-02	3.75E-03	16
Unk (KI= 796)P	795.68	1.60E-01	3.55E-02	4.46E-03	16
\$800-(KI= 800)M	800.00	0.00E+00	0.00E+00	0.00E+00	16
Unk (KI= 802)P	802.02	8.85E-01	6.26E-01	7.80E-02	2
Unk (KI= 803)P	802.57	1.19E-01	3.41E-02	4.24E-03	12
Unk (KI= 806)P	805.68	2.27E-01	6.63E-02	8.23E-03	15
Unk (KI= 807)P	807.10	1.13E-01	3.33E-02	4.13E-03	16
Unk (KI= 809)P	808.86	2.46E-01	7.68E-02	9.50E-03	9
Unk (KI= 812)P	812.30	1.01E-01	2.74E-02	3.62E-03	16
Unk (KI= 814)P	813.63	1.86E-01	4.64E-02	5.70E-03	16
Unk (KI= 817)P	817.05	7.73E-02	2.37E-02	2.90E-03	16
Unk (KI= 818)P	818.15	1.72E-01	4.03E-02	4.92E-03	16
Unk (KI= 821)P	821.31	7.01E-02	2.08E-02	2.53E-03	16
Unk (KI= 823)P	823.06				1
Unk (KI= 824)P	824.18	1.13E-01	2.51E-02	3.04E-03	16
Unk (KI= 825)P	825.24	2.06E-01	8.73E-02	1.06E-02	6
Unk (KI= 826)P	825.99	1.27E-01	4.88E-02	5.91E-03	10
Unk (KI= 828)P	828.14	8.81E-02	2.85E-02	3.44E-03	15
Unk (KI= 834)P	834.43	6.69E-02	1.91E-02	2.29E-03	15
Unk (KI= 837)P	837.05	1.28E-01	3.84E-02	4.58E-03	15
Unk (KI= 841)P	840.77	1.38E-01	3.86E-02	4.59E-03	16
Unk (KI= 843)P	842.68	8.57E-02	2.19E-02	2.60E-03	16
Unk (KI= 844)P	844.25	8.70E-02	2.38E-02	2.82E-03	16
Unk (KI= 846)P	846.18	1.43E-01	4.10E-02	4.85E-03	16
Unk (KI= 848)P	848.20	2.14E-01	5.83E-02	6.87E-03	16
Unk (KI= 850)P	850.36				1
Unk (KI= 851)P	851.03	3.83E-01	1.23E-01	1.45E-02	6
Unk (KI= 853)P	852.81	1.82E-01	5.30E-02	6.22E-03	16
Unk (KI= 854)P	854.42	1.26E-01	3.62E-02	4.24E-03	15
Unk (KI= 855)P	854.51				1
Unk (KI= 856)P	856.13	1.27E-01	3.50E-02	4.09E-03	16
Unk (KI= 860)P	859.98	6.10E-02	2.08E-02	2.42E-03	16



TABLE 11 (continued)

Unk (KI= 862)P	862.17	8.11E-02	1.96E-02	2.27E-03	16
Unk (KI= 864)P	863.83	4.98E-02	1.59E-02	1.84E-03	16
Unk (KI= 865)P	864.96	5.00E-02	1.34E-02	1.55E-03	16
Unk (KI= 867)P	867.44	1.02E-01	3.00E-02	3.45E-03	13
Unk (KI= 868)P	867.51	1.77E-02	8.85E-03	1.02E-03	3
Unk (KI= 869)P	869.50	6.23E-03	3.49E-03	4.02E-04	3
Unk (KI= 870)P	869.52	3.59E-02	1.12E-02	1.28E-03	13
Unk (KI= 871)P	871.19	5.49E-02	1.41E-02	1.61E-03	16
Unk (KI= 873)P	873.13	1.22E-01	4.26E-02	4.87E-03	16
Unk (KI= 877)P	877.13	8.64E-02	2.67E-02	3.04E-03	16
Unk (KI= 880)P	879.98	6.81E-02	1.89E-02	2.14E-03	16
Unk (KI= 882)P	881.58	5.81E-02	1.87E-02	2.12E-03	16
Unk (KI= 883)P	883.18	1.71E-01	6.95E-02	7.87E-03	8
Unk (KI= 884)P	884.48	6.05E-02	1.82E-02	2.05E-03	13
Unk (KI= 885)P	884.51	1.87E-02	1.00E-02	1.14E-03	3
Unk (KI= 887)P	887.35	1.51E-01	4.88E-02	5.50E-03	16
Unk (KI= 891)P	890.91	2.18E-01	4.98E-02	5.59E-03	16
Unk (KI= 892)P	892.50	4.88E-03	3.45E-03	3.87E-04	2
Unk (KI= 893)P	892.60	1.40E-01	4.94E-02	5.53E-03	14
Unk (KI= 894)P	894.49	1.37E-02	9.67E-03	1.08E-03	2
Unk (KI= 895)P	894.56	1.12E-01	2.99E-02	3.34E-03	14
Unk (KI= 896)P	895.91	1.20E-01	3.60E-02	4.02E-03	16
Unk (KI= 898)P	897.63	1.07E-01	2.71E-02	3.02E-03	16
8900-(KI= 900)M	900.00	0.00E+00	0.00E+00	0.00E+00	16
Unk (KI= 901)P	901.28	1.72E-01	5.26E-02	5.83E-03	7
Unk (KI= 906)P	906.25	1.33E-01	9.43E-02	1.04E-02	2
Unk (KI= 908)P	908.45	9.78E-02	2.60E-02	2.86E-03	16
Unk (KI= 911)P	910.82	9.80E-02	2.91E-02	3.20E-03	16
Unk (KI= 914)P	913.92	1.51E-01	3.84E-02	4.21E-03	16
Unk (KI= 915)P	915.37	1.52E-01	3.86E-02	4.21E-03	16
Unk (KI= 918)P	917.61	1.56E-01	5.01E-02	5.45E-03	16
Unk (KI= 919)P	917.96	5.62E-02	2.86E-02	3.12E-03	3
Unk (KI= 920)P	920.08	1.84E-01	4.93E-02	5.36E-03	16
Unk (KI= 923)P	922.62	8.54E-02	2.26E-02	2.45E-03	16
Unk (KI= 925)P	924.72	5.83E-02	1.60E-02	1.73E-03	16
Unk (KI= 928)P	927.51				1
Unk (KI= 929)P	929.12	1.07E-01	3.12E-02	3.35E-03	16
Jnk (KI= 932)P	931.68	1.89E-01	9.46E-02	1.02E-02	3
Unk (KI= 933)P	933.47	3.32E-02	1.10E-02	1.18E-03	14
Jnk (KI= 934)P	933.51	9.77E-03	6.91E-03	7.40E-04	2
Unk (KI= 939)P	939.44	5.76E-02	1.80E-02	1.92E-03	16
Unk (KI= 941)P	940.97	2.58E-01	1.31E-01	1.39E-02	3
Jnk (KI= 942)P	942.07				1
Jnk (KI= 945)P	945.27	9.83E-02	2.48E-02	2.62E-03	16
Jnk (KI= 947)P	947.40	7.09E-02	1.90E-02	2.01E-03	16
Jnk (KI= 952)P	952.05	1.03E-01	3.35E-02	3.52E-03	16
Jnk (KI= 953)P	953.48	3.70E-02	1.27E-02	1.33E-03	10
Jnk (KI= 954)P	953.52	3.70E-02	1.66E-02	1.74E-03	6
Jnk (KI= 956)P	955.77	5.11E-02	1.54E-02	1.61E-03	16
Jnk (KI= 957)P	956.81	1.29E-01	3.67E-02	3.83E-03	15
Jnk (KI= 960)P	960.46	7.71E-02	2.24E-02	2.33E-03	16
Jnk (KI= 962)P	962.09	6.77E-02	2.00E-02	2.08E-03	16
Jnk (KI= 965)P	964.70	7.71E-02	1.84E-02	1.91E-03	16
Jnk (KI= 966)P	966.08	1.94E-01	5.93E-02	6.14E-03	8
Jnk (KI= 967)P	967.37	1.66E-01	4.11E-02	4.25E-03	16
Jnk (KI= 971)P	970.85	5.90E-02	1.86E-02	1.91E-03	16
lnk (KI= 973)P	972.73	6.90E-02	1.96E-02	2.02E-03	16
lnk (KI= 975)P	974.87	2.53E-01	6.32E-02	6.49E-03	15
lnk (KI= 977)P	976.92	5.88E-02	1.91E-02	1.96E-03	16
lnk (KI= 979)P	979.22	1.41E-01	3.56E-02	3.64E-03	16
lnk (KI= 980)P	980.16	1.38E-01	5.89E-02	6.01E-03	5

TABLE 11 (continued)

Unk (KI= 982)P	981.70	9.67E-02	2.52E-02	2.57E-03	16
Unk (KI= 983)P	983.27	1.20E-01	3.36E-02	3.42E-03	16
Unk (KI= 986)P	986.19	7.67E-02	2.10E-02	2.13E-03	16
Unk (KI= 989)P	989.00	9.58E-02	2.49E-02	2.52E-03	16
Unk (KI= 991)P	991.49				1
Unk (KI= 992)P	991.72				1
Unk (KI= 993)P	993.45	1.00E-01	3.94E-02	3.96E-03	5
Unk (KI= 994)P	993.54	7.18E-02	2.68E-02	2.69E-03	11
Unk (KI= 995)P	995.26	2.07E-01	4.80E-02	4.82E-03	16
Unk (KI= 997)P	996.81	1.57E-01	4.69E-02	4.71E-03	14
Unk (KI= 998)P	998.30				1
\$1000-(KI= 1000)M	1000.00	0.00E+00	0.00E+00	0.00E+00	16
Unk (KI= 1004)P	1003.86	1.40E-01	3.59E-02	3.57E-03	16
Unk (KI= 1009)P	1008.96	1.32E-01	4.34E-02	4.30E-03	9
Unk (KI= 1012)P	1011.81				1
Unk (KI= 1014)P	1013.87	1.02E-01	3.13E-02	3.09E-03	16
Unk (KI= 1017)P	1017.04	8.54E-02	2.72E-02	2.68E-03	16
Unk (KI= 1019)P	1019.29	1.41E-01	6.14E-02	6.03E-03	5
Unk (KI= 1020)P	1020.07	1.85E-01	4.87E-02	4.77E-03	16
Unk (KI= 1023)P	1022.86	8.67E-02	2.59E-02	2.53E-03	16
Unk (KI= 1026)P	1025.76	6.57E-02	2.01E-02	1.96E-03	16
Unk (KI= 1028)P	1028.35	9.91E-02	3.13E-02	3.05E-03	16
Unk (KI= 1032)P	1031.59	1.25E-01	3.94E-02	3.82E-03	16
Unk (KI= 1033)P	1033.40	1.75E-01	4.55E-02	4.40E-03	14
Unk (KI= 1035)P	1034.56	1.13E-01	2.63E-02	2.54E-03	16
Unk (KI= 1036)P	1036.49	4.39E-03	3.11E-03	3.00E-04	2
Unk (KI= 1037)P	1036.59	9.74E-02	2.83E-02	2.73E-03	14
Unk (KI= 1038)P	1038.47	5.76E-02	1.75E-02	1.68E-03	9
Unk (KI= 1039)P	1038.52	3.98E-02	1.33E-02	1.28E-03	7
Unk (KI= 1041)P	1040.62	1.62E-01	4.67E-02	4.49E-03	15
Unk (KI= 1043)P	1043.22	1.15E-01	3.34E-02	3.20E-03	16
Unk (KI= 1045)P	1044.72	1.26E-01	3.07E-02	2.94E-03	16
Unk (KI= 1046)P	1046.36	1.06E-01	2.80E-02	2.68E-03	16
Unk (KI= 1049)P	1049.43	1.18E-01	2.82E-02	2.69E-03	16
Unk (KI= 1051)P	1050.60	9.62E-02	2.73E-02	2.60E-03	16
Unk (KI= 1054)P	1053.78	7.84E-02	2.37E-02	2.25E-03	16
Unk (KI= 1055)P	1055.28	2.36E-01	7.74E-02	7.33E-03	6
Unk (KI= 1056)P	1056.22	8.47E-02	3.85E-02	3.64E-03	4
Unk (KI= 1058)P	1057.91	6.69E-02	1.99E-02	1.88E-03	16
Unk (KI= 1061)P	1060.82	6.69E-02	2.10E-02	1.98E-03	16
Unk (KI= 1065)P	1064.55	6.64E-02	2.18E-02	2.05E-03	16
Unk (KI= 1066)P	1066.24	1.13E-01	3.16E-02	2.97E-03	16
Unk (KI= 1071)P	1070.62	9.42E-02	2.82E-02	2.63E-03	16
Unk (KI= 1073)P	1072.75	8.84E-02	3.13E-02	2.91E-03	16
Unk (KI= 1079)P	1079.03	9.67E-02	2.69E-02	2.50E-03	16
Unk (KI= 1081)P	1081.46				1
Unk (KI= 1082)P	1081.61	2.69E-01	8.61E-02	7.96E-03	15
Unk (KI= 1084)P	1084.33	7.01E-02	2.06E-02	1.90E-03	16
Unk (KI= 1087)P	1087.15	8.40E-02	2.61E-02	2.40E-03	16
Unk (KI= 1089)P	1089.42	1.14E-01	3.56E-02	3.26E-03	15
Unk (KI= 1090)P	1089.50				1
Unk (KI= 1091)P	1090.79	1.59E-01	4.36E-02	4.00E-03	16
Unk (KI= 1094)P	1093.83	1.28E-01	4.19E-02	3.83E-03	16
Unk (KI= 1096)P	1095.96	1.12E-01	3.04E-02	2.77E-03	16
\$1100-(KI= 1100)M	1100.00	0.00E+00	0.00E+00	0.00E+00	16
Unk (KI= 1102)P	1101.67	1.39E-01	4.78E-02	4.34E-03	10
Unk (KI= 1104)P	1104.44	1.21E-01	3.30E-02	2.99E-03	14
Unk (KI= 1105)P	1104.55	2.03E-02	1.43E-02	1.30E-03	2
Unk (KI= 1106)P	1106.50				1
Unk (KI= 1107)P	1106.62	1.40E-01	4.61E-02	4.16E-03	8
Unk (KI= 1108)P	1108.44	1.67E-01	4.69E-02	4.23E-03	16

TABLE 11 (continued)

Unk (KI= 1110)P	1110.30	2.06E-01	6.87E-02	6.19E-03	14
Unk (KI= 1111)P	1110.41				1
Unk (KI= 1113)P	1112.59	9.47E-02	3.13E-02	2.81E-03	16
Unk (KI= 1116)P	1115.75	9.40E-02	2.67E-02	2.40E-03	16
Unk (KI= 1118)P	1117.71	1.39E-01	4.15E-02	3.71E-03	16
Unk (KI= 1120)P	1119.68	2.22E-01	5.61E-02	5.01E-03	16
Unk (KI= 1122)P	1121.89	1.10E-02	7.77E-03	6.93E-04	2
Unk (KI= 1123)P	1123.45	9.42E-02	2.91E-02	2.59E-03	16
Unk (KI= 1127)P	1127.01	1.06E-01	3.19E-02	2.83E-03	16
Unk (KI= 1129)P	1129.44	1.40E-01	3.94E-02	3.49E-03	15
Unk (KI= 1130)P	1129.51				1
Unk (KI= 1133)P	1132.66	1.07E-01	3.24E-02	2.86E-03	15
Unk (KI= 1134)P	1133.67	3.53E-01	1.57E-01	1.38E-02	4
Unk (KI= 1135)P	1135.02	1.53E-01	4.42E-02	3.90E-03	16
Unk (KI= 1137)P	1137.14	2.28E-01	5.54E-02	4.87E-03	16
Unk (KI= 1140)P	1139.70	1.96E-01	5.61E-02	4.92E-03	16
Unk (KI= 1141)P	1140.96	1.32E-01	3.48E-02	3.05E-03	16
Unk (KI= 1144)P	1144.02	9.55E-02	2.89E-02	2.52E-03	16
Unk (KI= 1148)P	1148.27	1.36E-01	4.02E-02	3.50E-03	16
Unk (KI= 1150)P	1149.76	1.73E-01	4.29E-02	3.74E-03	16
Unk (KI= 1152)P	1152.50				1
Unk (KI= 1153)P	1152.60	1.34E-01	4.19E-02	3.65E-03	15
Unk (KI= 1155)P	1154.97	2.16E-01	5.52E-02	4.78E-03	15
Unk (KI= 1156)P	1156.09	1.39E-01	3.73E-02	3.22E-03	16
Unk (KI= 1158)P	1158.03	1.39E-01	4.58E-02	3.96E-03	16
Unk (KI= 1160)P	1159.85	1.03E-01	2.81E-02	2.42E-03	16
Unk (KI= 1162)P	1161.78	1.50E-01	4.47E-02	3.85E-03	16
Unk (KI= 1164)P	1164.13	7.18E-02	2.30E-02	1.98E-03	16
Unk (KI= 1166)P	1166.36				1
Unk (KI= 1170)P	1170.35	1.19E-01	3.34E-02	2.86E-03	16
Unk (KI= 1171)P	1171.40	2.48E-01	6.87E-02	5.87E-03	15
Unk (KI= 1176)P	1175.88	3.83E-01	1.03E-01	8.78E-03	16
Unk (KI= 1177)P	1176.77	1.50E+00	8.21E-01	6.98E-02	3
Unk (KI= 1180)P	1179.66	2.69E-01	6.56E-02	5.56E-03	16
Unk (KI= 1181)P	1181.43	1.33E-01	3.70E-02	3.13E-03	16
Unk (KI= 1185)P	1185.34	2.56E-01	5.67E-02	4.78E-03	16
Unk (KI= 1189)P	1188.73				1
Unk (KI= 1190)P	1189.59	1.54E-01	4.74E-02	3.98E-03	16
Unk (KI= 1191)P	1191.46	7.98E-02	2.91E-02	2.45E-03	8
Unk (KI= 1192)P	1191.59	1.15E-01	4.00E-02	3.36E-03	8
Unk (KI= 1194)P	1193.94	1.58E-01	4.47E-02	3.74E-03	16
Unk (KI= 1195)P	1195.13	3.18E-01	2.25E-01	1.88E-02	2
Unk (KI= 1196)P	1195.70	6.42E-02	4.54E-02	3.80E-03	2
§1200-(KI= 1200)M	1200.00	0.00E+00	0.00E+00	0.00E+00	16
Unk (KI= 1202)P	1201.61				1
Unk (KI= 1203)P	1203.39	1.33E-01	3.10E-02	2.99E-03	16
Unk (KI= 1205)P	1205.49				1
Unk (KI= 1206)P	1205.58	1.37E-01	3.36E-02	3.20E-03	15
Unk (KI= 1207)P	1207.13	1.49E-01	3.10E-02	5.05E-03	4
Unk (KI= 1208)P	1207.37				1
Unk (KI= 1211)P	1210.93	1.87E-01	6.04E-02	4.99E-03	16
Unk (KI= 1214)P	1214.15	8.98E-02	2.70E-02	2.22E-03	16
Unk (KI= 1218)P	1218.17	2.05E-01	5.35E-02	4.39E-03	16
Unk (KI= 1220)P	1219.94	2.95E-01	1.01E-01	8.27E-03	7
Unk (KI= 1222)P	1221.71	1.67E-01	4.57E-02	3.74E-03	16
Unk (KI= 1224)P	1224.32	2.36E-01	5.70E-02	4.66E-03	16
Unk (KI= 1228)P	1227.83	2.79E-01	7.09E-02	5.78E-03	16
Unk (KI= 1234)P	1233.86	1.43E-01	4.22E-02	3.42E-03	16
Unk (KI= 1237)P	1236.81				1
Unk (KI= 1239)P	1238.63	1.04E-01	3.11E-02	2.51E-03	16
Unk (KI= 1242)P	1241.71	1.76E-01	5.20E-02	4.19E-03	16

TABLE 11 (continued)

Unk (KI= 1245)P	1245.41	1.49E-01	4.70E-02	3.78E-03	15
Unk (KI= 1246)P	1245.51				1
Unk (KI= 1248)P	1248.46	1.02E-01	3.50E-02	2.81E-03	10
Unk (KI= 1249)P	1248.52	2.32E-02	9.32E-03	7.46E-04	4
Unk (KI= 1250)P	1249.99	3.08E-01	2.18E-01	1.74E-02	2
Unk (KI= 1253)P	1252.80	1.65E-01	4.17E-02	3.33E-03	16
Unk (KI= 1255)P	1254.84	1.35E-01	3.93E-02	3.13E-03	16
Unk (KI= 1259)P	1259.28	1.01E-01	2.96E-02	2.35E-03	16
Unk (KI= 1263)P	1263.99	1.26E-01	3.04E-02	2.41E-03	16
Unk (KI= 1267)P	1267.44	1.04E-01	5.88E-02	4.64E-03	3
Unk (KI= 1268)P	1267.58	1.54E-01	4.96E-02	3.92E-03	13
Unk (KI= 1270)P	1270.25	1.28E-01	3.18E-02	2.51E-03	16
Unk (KI= 1273)P	1273.14	9.55E-02	2.97E-02	2.33E-03	16
Unk (KI= 1276)P	1276.09	2.92E-01	1.12E-01	8.76E-03	8
Unk (KI= 1277)P	1277.48				1
Unk (KI= 1278)P	1277.56	1.29E-01	5.56E-02	4.35E-03	8
Unk (KI= 1280)P	1280.37	1.50E-01	1.06E-01	8.27E-03	2
Unk (KI= 1283)P	1282.65	1.47E-01	3.45E-02	2.69E-03	16
Unk (KI= 1286)P	1285.65	2.15E-01	5.36E-02	4.17E-03	16
Unk (KI= 1288)P	1288.32	1.38E-01	5.93E-02	4.60E-03	5
Unk (KI= 1290)P	1289.77				1
Unk (KI= 1291)P	1291.25				1
Unk (KI= 1294)P	1294.23	3.45E-01	8.11E-02	6.27E-03	16
\$1300-(KI= 1300)M	1300.00	0.00E+00	0.00E+00	0.00E+00	16
Unk (KI= 1304)P	1304.22	5.49E-02	2.58E-02	1.98E-03	4
Unk (KI= 1305)P	1305.30				1
Unk (KI= 1310)P	1309.63	1.82E-01	5.99E-02	4.57E-03	16
Unk (KI= 1311)P	1311.46	1.04E-01	4.92E-02	3.75E-03	5
Unk (KI= 1312)P	1311.59	2.17E-01	7.36E-02	5.61E-03	11
Unk (KI= 1316)P	1316.24	2.24E-01	8.94E-02	6.79E-03	5
Unk (KI= 1318)P	1317.96	1.98E-01	4.55E-02	3.45E-03	16
Unk (KI= 1320)P	1320.05	7.37E-02	5.21E-02	3.95E-03	2
Unk (KI= 1323)P	1323.13	3.87E-01	1.08E-01	8.15E-03	15
Unk (KI= 1328)P	1328.02	3.50E-01	1.25E-01	9.42E-03	10
Unk (KI= 1330)P	1333.37	2.70E-01	7.40E-02	5.35E-03	13
Unk (KI= 1334)P	1333.57	8.03E-02	3.46E-02	2.59E-03	4
Unk (KI= 1336)P	1336.18				1
Unk (KI= 1338)P	1338.43	1.50E-01	4.32E-02	3.23E-03	13
Unk (KI= 1339)P	1338.54	3.49E-02	1.97E-02	1.47E-03	3
Unk (KI= 1342)P	1342.21	2.07E-01	6.15E-02	4.58E-03	16
Unk (KI= 1344)P	1344.38	2.16E-01	1.15E-01	8.59E-03	3
Unk (KI= 1345)P	1344.54	5.22E-02	2.19E-02	1.63E-03	4
Unk (KI= 1347)P	1347.42	1.55E-01	5.96E-02	4.42E-03	5
Unk (KI= 1348)P	1347.56	1.63E-01	5.92E-02	4.39E-03	11
Unk (KI= 1351)P	1351.09	1.21E-01	3.51E-02	2.60E-03	16
Unk (KI= 1354)P	1354.05	2.14E-01	6.13E-02	4.53E-03	16
Unk (KI= 1359)P	1358.85	1.31E-01	3.50E-02	2.57E-03	16
Unk (KI= 1364)P	1363.97	1.45E-01	3.92E-02	2.87E-03	16
Unk (KI= 1367)P	1367.00				1
Unk (KI= 1370)P	1370.33	1.46E-01	4.06E-02	2.96E-03	16
Unk (KI= 1377)P	1376.71	1.08E-01	3.55E-02	2.58E-03	16
Unk (KI= 1383)P	1382.99	1.77E-01	5.10E-02	3.69E-03	16
Unk (KI= 1388)P	1388.47				1
Unk (KI= 1389)P	1388.59	1.90E-01	5.57E-02	4.01E-03	15
Unk (KI= 1393)P	1393.43	1.74E-01	5.26E-02	3.78E-03	14
Unk (KI= 1394)P	1393.52	2.76E-02	1.95E-02	1.40E-03	2
\$1400-(KI= 1400)M	1400.00	0.00E+00	0.00E+00	0.00E+00	16
Unk (KI= 1404)P	1404.01	1.58E-01	4.86E-02	3.46E-03	16
Unk (KI= 1408)P	1407.91	1.07E-01	3.35E-02	2.38E-03	16
Unk (KI= 1411)P	1411.05	1.27E-01	3.45E-02	2.44E-03	16
Unk (KI= 1413)P	1413.43	1.02E-01	7.20E-02	5.09E-03	2

TABLE 11 (Concluded)

Unk (KI= 1414)P	1413.63	1.99E-01	6.70E-02	4.74E-03	14
Unk (KI= 1416)P	1415.69	1.75E-01	9.26E-02	4.54E-03	3
Unk (KI= 1417)P	1415.99				1
Unk (KI= 1418)P	1417.59				1
Unk (KI= 1422)P	1421.95	3.42E-01	1.21E-01	8.52E-03	8
Unk (KI= 1425)P	1425.02	2.32E-01	1.64E-01	1.15E-02	2
Unk (KI= 1427)P	1427.17	2.59E-01	5.94E-02	4.17E-03	16
Unk (KI= 1430)P	1430.27	2.71E-01	6.78E-02	4.74E-03	16
Unk (KI= 1434)P	1434.13	3.53E-01	9.64E-02	6.72E-03	15
Unk (KI= 1443)P	1443.19	2.06E-01	6.04E-02	4.19E-03	16
Unk (KI= 1446)P	1446.14	2.78E-01	7.90E-02	5.47E-03	16
Unk (KI= 1449)P	1448.93	1.10E-02	7.77E-03	5.36E-04	2
Unk (KI= 1450)P	1450.44	5.98E-02	2.99E-02	2.04E-03	3
Unk (KI= 1451)P	1450.58	8.06E-03	5.70E-03	3.93E-04	2
Unk (KI= 1453)P	1453.45	1.12E-01	4.20E-02	2.89E-03	9
Unk (KI= 1454)P	1453.56	8.37E-02	2.77E-02	1.91E-03	7
Unk (KI= 1459)P	1458.67	2.23E-01	7.12E-02	4.88E-03	16
Unk (KI= 1463)P	1462.67	1.42E-01	3.64E-02	2.50E-03	16
Unk (KI= 1471)P	1470.74	1.67E-01	5.00E-02	3.40E-03	16
Unk (KI= 1494)P	1494.06				1
\$1500-(KI= 1500)M	1500.00	0.00E+00	0.00E+00	0.00E+00	16
Unk (KI= 1515)P	1515.47				1
Unk (KI= 1516)P	1519.60				1
Unk (KI= 1520)P	1519.97	1.74E-01	8.06E-02	5.30E-03	5
\$1600-(KI= 1600)M	1600.00	0.00E+00	0.00E+00	0.00E+00	16
\$ANTH-D10(15)(KI=1767)	1771.66	4.44E-01	1.26E-01	7.09E-03	16
\$2118-(IMPURITY #3)M	2118.00	0.00E+00	0.00E+00	0.00E+00	16
TOTAL CONCENTRATION	5000.00	0.00E+00	0.00E+00	0.00E+00	16

TABLE 12. DFANME LAS PEAK METHOD FOR INITIAL INTERPRETATION  
OF RAW DATA FILES

SEP 15, 1983 8:19  
METHOD: DFANME  
CHANNEL 12

1. DATA INPUT

RUNTH @PKS  
130.00, 500

MV/MIN DELAY MIN-AR BUNCH  
.300, 0.00, 500, NO

INTEGRATOR EVENTS

	TIME	EVENT
1	8.58	A
2	10.40	E
3	/E	

CONTROL EVENTS

	TIME	EVENT	ECM	RLY
1	/E			

2. DATA ANALYSIS

PROC RPRT SUP-UNK  
ISTD. ME. NO

UNITS TITLE  
mg/ml, DISTILLATE FUELS

REF-RTW	XRTW	RF-UNK	ID-LVL	DVT
.05	1.0	1.1000E+ 0.	500.	0.00

CALIBRATION PEAKS

	TIME	AMOUNT	FACTOR	NAME
1	2.57	1.0000E+ 0.	1.1000E+ 0.	8400-(KI= 400)M
2	5.50	1.0000E+ 0.	1.1000E+ 0.	8500-(KI= 500)M
3	8.58	1.0000E+ 0.	0.0000E+ 0.	CH2CL2 SOLVENT
4	12.12	1.0000E+ 0.	1.1000E+ 0.	IMPURITY #1-(KI= 558)
5	16.97	1.0000E+ 0.	1.1000E+ 0.	8600-(KI= 600)M
6	24.66	1.0000E+ 0.	1.1000E+ 0.	IMPURITY #2-(KI= 674)
7	27.24	1.0000E+ 0.	1.1000E+ 0.	8700-(KI= 700)M
8	34.29	1.0000E+ 0.	1.1000E+ 0.	8800-(KI= 800)M
9	45.33	1.0000E+ 0.	1.1000E+ 0.	8900-(KI= 900)M
10	54.06	1.0000E+ 0.	1.1000E+ 0.	9100-(KI= 1000)M
11	62.30	1.0000E+ 0.	1.1000E+ 0.	91100-(KI= 1100)M
12	70.00	1.0000E+ 0.	1.1000E+ 0.	91200-(KI= 1200)M
13	77.24	1.0000E+ 0.	1.1000E+ 0.	91300-(KI= 1300)M
14	84.07	1.0000E+ 0.	1.1000E+ 0.	91400-(KI= 1400)M
15	90.50	1.0000E+ 0.	1.1000E+ 0.	91500-(KI= 1500)M
16	96.57	1.0000E+ 0.	1.1000E+ 0.	91600-(KI= 1600)M
17	102.34	1.0000E+ 0.	1.1000E+ 0.	91700-(KI= 1700)M
18	106.10	1.0000E+ 1.	1.0000E+ 0.	8ANTH-#10(18)(KI=1772)
19	107.83	1.0000E+ 0.	1.1000E+ 0.	91800-(KI= 1800)M
20	113.08	1.0000E+ 0.	1.1000E+ 0.	91900-(KI= 1900)M
21	118.15	1.0000E+ 0.	1.1000E+ 0.	92000-(KI= 2000)M
22	125.42	1.0000E+ 0.	1.1000E+ 0.	92118-(IMPURITY #3)M
23	/E			

TABLE 12 (Concluded)

3. USER PROGRAMS

POST-ANAL DIALQ-PRO PARAM-FILE  
KOVPG1 , FILEA

4. REPORTS

RDVC ORPTS  
1 TS. 1  
2 /E

DONE

TABLE 13. FIRST PAGE OF OUTPUT PRODUCED BY ANALYZING A DFPxxx FILE WITH DFNME

REPORT: 7.21 CHANNEL: 12 DISTILLATE FUELS  
 SAMPLE: 607JP4MEC01 INJECTED AT 5:38:03 ON MAY 24, 1983  
 ISTD METHOD: DFNME BTL: 13  
 ACTUAL RUN TIME: 130.021 MINUTES  
 ISTD-RATIO: 10.000 mg/ml STD-AMT: 10.0000 SAMP-AMT: 1.0000

RT	AREA	mg/ml	NAME
1.94	622 VV	.131	
2.25	2270 VV	.478	
2.61	7088 BV	1.491	8400-(KI= 400)M
4.30	31125 VV	6.548	
5.56	47377 VV	9.967	8500-(KI= 500)M
6.36	678 VV	.143	
7.20	1041 VV	.219	
7.88	4102 BV	.863	
8.60	16843340 ++	0.000	CH2CL2 SOLVENT
11.19	7456 VV	1.569	
11.50	9037 VV	1.901	
12.22	521 VB	.110	IMPURITY #1-(KI= 558)
12.44	53562 BV	11.268	
14.40	37693 VV	7.930	
17.04	92429 VV	19.445	8600-(KI= 600)M
18.48	1153 BB	.243	
19.62	49092 VV	10.328	
19.86	569 VB	.120	
20.40	9566 BB	2.013	
22.53	5491 VV	1.155	
22.81	46372 BB	9.756	
23.15	19578 BB	4.119	
24.22	27270 BV	5.737	
24.36	65988 VB	13.893	
24.78	3974 VB	.836	IMPURITY #2-(KI= 674)
25.09	79920 BV	14.814	
25.34	14215 VV	2.990	
25.57	13623 VV	2.866	
25.83	24739 VV	5.205	
25.96	7681 VB	1.616	
27.42	145618 VV	30.635	8700-(KI= 700)M
27.59	681 VV	.143	
27.89	670 VV	.141	
28.15	1028 VB	.216	
28.56	92241 VV	19.406	
28.84	8329 VV	1.752	
29.16	5982 BB	1.258	
29.77	9375 BB	1.972	
30.16	13897 BV	2.924	
30.24	23418 VV	4.927	
30.48	9329 VV	1.963	
30.61	8431 VB	1.774	
31.18	9021 BV	1.898	



TABLE 14. FIRST PAGE OF OUTPUT FROM POST ANALYSIS PROGRAM KOVPG1

## CORRELATION OF RETENTION TIMES (MIN)

WITH KOVATS INDEX FOR SAMPLE: 607JP4MEC01

PROCESSED DATA FILE: DFP162

RAW DATA FILE: DFR162

RT	RET. INDEX	AREA	CONC.	NAME
1.94	377	622	.131	
2.25	388	2270	.478	
2.61	400	7088	1.491	6400-(KI= 400)M
4.30	457	31125	6.548	
5.56	500	47377	9.967	6500-(KI= 500)M
6.36	507	678	.143	
7.20	514	1041	.219	
7.88	520	4102	.863	
8.40	526	16843340		CH2CL2 SOLVENT
11.19	549	7456	1.569	
11.50	552	9037	1.901	
12.22	558	521	.110	IMPURITY #1-(KI= 558)
12.44	560	53562	11.268	
14.40	577	37693	7.930	
17.04	600	92429	19.445	6600-(KI= 600)M
18.48	614	1153	.243	
19.62	625	49092	10.328	
19.86	627	569	.120	
20.40	632	9566	2.013	
22.53	653	5491	1.155	
22.86	656	46372	9.756	
23.15	659	19578	4.119	
24.22	669	27270	5.737	
24.36	670	65588	13.883	
24.78	675	3974	.836	IMPURITY #2-(KI= 674)
25.09	678	79920	16.814	
25.34	680	14215	2.990	
25.57	682	13623	2.866	
25.83	685	24739	5.205	
25.96	686	7681	1.616	
27.42	700	145618	30.635	6700-(KI= 700)M
27.59	702	681	.143	
27.89	705	670	.141	
28.15	708	1028	.216	
28.56	712	92241	19.406	
28.84	716	8329	1.752	
29.16	719	5982	1.258	
29.77	726	9375	1.972	
30.16	730	13897	91 2.924	

TABLE 15. FIRST PAGE OF OUTPUT FROM LISTING THE BKPxxx  
FILE CREATED BY KOVPG2 POSTANALYSIS PROGRAM

REPORT: 7.22 CHANNEL: 12 ABSOLUTE AMOUNTS

SAMPLE: 607JP4MEC01 INJECTED AT 5:38:03 ON MAY 24, 1983

ISTD METHOD: DFABME BTL: 13

ACTUAL RUN TIME: 540.000 MINUTES

ISTD-RATIO: 10.000 mg/ml STD-AMT: 10.0000 SAMP-AMT: 1.0000

RT	AREA	mg/ml	NAME	
37.74	622 VV	.119	KI= 377.21	FE=001
38.81	2270 VV	.434	KI= 388.01	FE=002
40.00	7088 BV	1.356	8400-n-C4-ANE1	FE=003
45.74	31125 VV	5.953	KI= 457.61	FE=004
50.00	47377 VV	9.061	8500-n-C5-ANE1	FE=005
50.70	678 VV	.130	KI= 507.01	FE=006
51.43	1041 VV	.199	KI= 514.31	FE=008
52.02	4102 BV	.784	KI= 520.11	FE=009
52.65	16843340 ++	0.000	CH2CL2 SOLVENT	
54.90	7456 VV	1.426	KI= 549.71	FE=010
55.17	9037 VV	1.728	KI= 552.41	FE=011
55.79	521 VB	.100	IMPURITY #1(KI= 558.6)	
55.99	53562 BV	10.244	KI= 560.41	FE=012
57.70	37693 VV	7.209	KI= 577.31	FE=013
60.00	92429 VV	17.677	8600-n-C6-ANE1	FE=014
61.39	1153 BB	.221	KI= 613.91	FE=017
62.48	49092 VV	9.389	KI= 624.81	FE=018
62.72	569 VB	.109	KI= 627.31	FE=019
63.24	9566 BB	1.830	KI= 632.41	FE=020
65.28	5491 VV	1.050	KI= 653.01	FE=021
65.60	46372 BB	8.869	KI= 656.11	FE=022
65.88	19578 BB	3.744	KI= 658.81	FE=023
66.91	27270 BV	5.216	KI= 669.01	FE=024
67.05	65988 VB	12.621	KI= 670.41	FE=025
67.45	3974 VB	.760	IMPURITY #2(KI= 674.4)	
67.76	79920 BV	15.285	KI= 677.41	FE=026
67.99	14215 VV	2.719	KI= 679.81	FE=027
68.21	13623 VV	2.606	KI= 682.01	FE=028
68.47	24739 VV	4.731	KI= 684.61	FE=029
68.59	7681 VB	1.469	KI= 685.81	FE=030
70.00	145618 VV	27.850	8700-n-C7-ANE1	FE=031
70.18	681 VV	.130	KI= 701.81	FE=032
70.51	670 VV	.128	KI= 705.01	FE=033
70.80	1028 VB	.197	KI= 708.01	FE=035
71.25	92241 VV	17.642	KI= 712.51	FE=036
71.56	8329 VV	1.593	KI= 715.61	FE=037
71.91	5982 BB	1.144	KI= 719.11	FE=038
72.58	9375 BB	1.793	KI= 725.81	FE=039
73.00	13897 BV	2.658	KI= 730.01	FE=040
73.10	23418 VV	4.479	KI= 731.01	FE=041
73.36	9329 VV	1.784	KI= 733.61	FE=042
73.50	8431 VB	1.613	KI= 735.01	FE=043
74.12	9021 BV	1.725	KI= 741.21	FE=044

TABLE 16. LISTING OF THE DFABME LAS INTERPRETATION METHOD USED  
FOR FEATURE IDENTIFICATION AND ABSOLUTE QUANTITATION

L1.M.DFABME

SEP 13. 1983 10:06  
METHOD: DFABME  
CHANNEL 12

1. DATA INPUT

RUNTH 8PKS  
540.00. 500

RV/MIN DELAY MIN-AR BUNCH  
.300. 0.00. 500. NO

INTEGRATOR EVENTS  
TIME EVENT  
1 /E

CONTROL EVENTS  
TIME EVENT ECM RLY  
1 /E

2. DATA ANALYSIS

PROC RPRT SUP-UNK  
ISTD. ME. NO

UNITS TITLE  
mg/ml . ABSOLUTE AMOUNTS

REF-RTN XRTN RF-UNK ID-LVL DVT  
.50. .5. 1.1000E+ 0. 500. 0.00

CALIBRATION PEAKS

	TIME	AMOUNT	FACTOR	NAME	
1	37.73.	1.0000E+ 0.	1.1000E+ 0.	KI= 377.21	FE=001
2	38.80.	1.0000E+ 0.	1.1000E+ 0.	KI= 388.01	FE=002
3	40.00.	1.0000E+ 0.	1.1000E+ 0.	8400-n-C4-ANE1	FE=003
4	48.91.	1.0000E+ 0.	1.1000E+ 0.	KI= 457.61	FE=004
5	50.00.	1.0000E+ 0.	1.1000E+ 0.	8500-n-C5-ANE1	FE=005
6	50.71.	1.0000E+ 0.	1.1000E+ 0.	KI= 507.01	FE=006
7	51.14.	1.0000E+ 0.	1.1000E+ 0.	KI= 511.21	FE=007
8	51.44.	1.0000E+ 0.	1.1000E+ 0.	KI= 514.31	FE=008
9	52.01.	1.0000E+ 0.	1.1000E+ 0.	KI= 520.11	FE=009
10	52.60.	1.0000E+ 0.	0.0000E+ 0.	CH2CL2 SOLVENT	
11	54.92.	1.0000E+ 0.	1.1000E+ 0.	KI= 549.71	FE=010
12	55.10.	1.0000E+ 0.	1.1000E+ 0.	KI= 552.41	FE=011
13	55.82.	1.0000E+ 0.	1.1000E+ 0.	IMPURITY #1(KI= 558.61)	FE=012
14	55.95.	1.0000E+ 0.	1.1000E+ 0.	KI= 560.41	FE=013
15	57.74.	1.0000E+ 0.	1.1000E+ 0.	KI= 577.31	FE=014
16	60.00.	1.0000E+ 0.	1.1000E+ 0.	8400-n-C6-ANE1	FE=015
17	60.92.	1.0000E+ 0.	1.1000E+ 0.	KI= 609.21	FE=016
18	61.12.	1.0000E+ 0.	1.1000E+ 0.	KI= 611.21	FE=017
19	61.39.	1.0000E+ 0.	1.1000E+ 0.	KI= 613.91	FE=018
20	62.48.	1.0000E+ 0.	1.1000E+ 0.	KI= 624.81	FE=019
21	62.73.	1.0000E+ 0.	1.1000E+ 0.	KI= 627.31	FE=020
22	63.25.	1.0000E+ 0.	1.1000E+ 0.	KI= 632.41	FE=021
23	65.30.	1.0000E+ 0.	1.1000E+ 0.	KI= 653.01	FE=022
24	65.61.	1.0000E+ 0.	1.1000E+ 0.	KI= 656.11	FE=023
25	65.89.	1.0000E+ 0.	1.1000E+ 0.	KI= 658.81	FE=023

TABLE 16 (continued)

26	66.94.	1.0000E+ 0.	1.1000E+ 0.	KI= 669.01	FE=024
27	67.04.	1.0000E+ 0.	1.1000E+ 0.	KI= 670.41	FE=025
28	67.44.	1.0000E+ 0.	1.1000E+ 0.	IMPURITY #2(KI= 674.4)	FE=026
29	67.74.	1.0000E+ 0.	1.1000E+ 0.	KI= 677.41	FE=027
30	67.98.	1.0000E+ 0.	1.1000E+ 0.	KI= 679.81	FE=028
31	68.20.	1.0000E+ 0.	1.1000E+ 0.	KI= 682.01	FE=029
32	68.46.	1.0000E+ 0.	1.1000E+ 0.	KI= 684.61	FE=030
33	68.58.	1.0000E+ 0.	1.1000E+ 0.	KI= 685.81	FE=031
34	70.00.	1.0000E+ 0.	1.1000E+ 0.	9700-n-C7-ANEI	FE=032
35	70.18.	1.0000E+ 0.	1.1000E+ 0.	KI= 701.81	FE=033
36	70.50.	1.0000E+ 0.	1.1000E+ 0.	KI= 705.01	FE=034
37	70.46.	1.0000E+ 0.	1.1000E+ 0.	KI= 706.71	FE=035
38	70.60.	1.0000E+ 0.	1.1000E+ 0.	KI= 708.01	FE=036
39	71.25.	1.0000E+ 0.	1.1000E+ 0.	KI= 712.51	FE=037
40	71.56.	1.0000E+ 0.	1.1000E+ 0.	KI= 715.61	FE=038
41	71.91.	1.0000E+ 0.	1.1000E+ 0.	KI= 719.11	FE=039
42	72.58.	1.0000E+ 0.	1.1000E+ 0.	KI= 725.81	FE=040
43	73.00.	1.0000E+ 0.	1.1000E+ 0.	KI= 730.01	FE=041
44	73.10.	1.0000E+ 0.	1.1000E+ 0.	KI= 731.01	FE=042
45	73.36.	1.0000E+ 0.	1.1000E+ 0.	KI= 733.61	FE=043
46	73.50.	1.0000E+ 0.	1.1000E+ 0.	KI= 735.01	FE=044
47	74.12.	1.0000E+ 0.	1.1000E+ 0.	KI= 741.21	FE=045
48	74.33.	1.0000E+ 0.	1.1000E+ 0.	KI= 743.31	FE=046
49	74.54.	1.0000E+ 0.	1.1000E+ 0.	KI= 745.41	FE=047
50	74.99.	1.0000E+ 0.	1.1000E+ 0.	KI= 749.91	FE=048
51	75.39.	1.0000E+ 0.	1.1000E+ 0.	KI= 753.91	FE=049
52	75.71.	1.0000E+ 0.	1.1000E+ 0.	KI= 757.11	FE=050
53	75.88.	1.0000E+ 0.	1.1000E+ 0.	KI= 758.81	FE=051
54	76.20.	1.0000E+ 0.	1.1000E+ 0.	KI= 762.01	FE=052
55	76.53.	1.0000E+ 0.	1.1000E+ 0.	KI= 765.31	FE=053
56	76.64.	1.0000E+ 0.	1.1000E+ 0.	KI= 766.41	FE=054
57	76.88.	1.0000E+ 0.	1.1000E+ 0.	KI= 768.81	FE=055
58	77.06.	1.0000E+ 0.	1.1000E+ 0.	KI= 770.61	FE=056
59	77.24.	1.0000E+ 0.	1.1000E+ 0.	KI= 772.41	FE=057
60	77.52.	1.0000E+ 0.	1.1000E+ 0.	KI= 775.21	FE=058
61	78.10.	1.0000E+ 0.	1.1000E+ 0.	KI= 781.01	FE=059
62	78.32.	1.0000E+ 0.	1.1000E+ 0.	KI= 783.21	FE=060
63	78.44.	1.0000E+ 0.	1.1000E+ 0.	KI= 784.41	FE=061
64	78.55.	1.0000E+ 0.	1.1000E+ 0.	KI= 785.41	FE=062
65	78.69.	1.0000E+ 0.	1.1000E+ 0.	KI= 786.91	FE=063
66	79.11.	1.0000E+ 0.	1.1000E+ 0.	KI= 791.11	FE=064
67	79.44.	1.0000E+ 0.	1.1000E+ 0.	KI= 794.41	FE=065
68	79.57.	1.0000E+ 0.	1.1000E+ 0.	KI= 795.71	FE=066
69	80.00.	1.0000E+ 0.	1.1000E+ 0.	9800-n-C8-ANEI	FE=067
70	80.26.	1.0000E+ 0.	1.1000E+ 0.	KI= 802.51	FE=068
71	80.57.	1.0000E+ 0.	1.1000E+ 0.	KI= 805.71	FE=069
72	80.71.	1.0000E+ 0.	1.1000E+ 0.	KI= 807.11	FE=070
73	80.89.	1.0000E+ 0.	1.1000E+ 0.	KI= 808.91	FE=071
74	81.23.	1.0000E+ 0.	1.1000E+ 0.	KI= 812.31	FE=072
75	81.36.	1.0000E+ 0.	1.1000E+ 0.	KI= 813.61	FE=073
76	81.70.	1.0000E+ 0.	1.1000E+ 0.	KI= 817.01	FE=074
77	81.82.	1.0000E+ 0.	1.1000E+ 0.	KI= 818.21	FE=075
78	82.13.	1.0000E+ 0.	1.1000E+ 0.	KI= 821.31	FE=076
79	82.42.	1.0000E+ 0.	1.1000E+ 0.	KI= 824.21	FE=077
80	82.58.	1.0000E+ 0.	1.1000E+ 0.	KI= 825.71	FE=078
81	82.81.	1.0000E+ 0.	1.1000E+ 0.	KI= 828.11	FE=079
82	83.44.	1.0000E+ 0.	1.1000E+ 0.	KI= 834.41	FE=080
83	83.70.	1.0000E+ 0.	1.1000E+ 0.	KI= 837.01	FE=081
84	84.08.	1.0000E+ 0.	1.1000E+ 0.	KI= 840.81	FE=082
85	84.27.	1.0000E+ 0.	1.1000E+ 0.	KI= 842.71	FE=083
86	84.42.	1.0000E+ 0.	1.1000E+ 0.	KI= 844.21	FE=083

TABLE 16 (continued)

87	84.62	1.0000E+ 0	1.1000E+ 0	KI= 846.21	FE=084
88	84.82	1.0000E+ 0	1.1000E+ 0	KI= 848.21	FE=085
89	85.09	1.0000E+ 0	1.1000E+ 0	KI= 850.91	FE=086
90	85.28	1.0000E+ 0	1.1000E+ 0	KI= 852.81	FE=087
91	85.44	1.0000E+ 0	1.1000E+ 0	KI= 854.41	FE=088
92	85.61	1.0000E+ 0	1.1000E+ 0	KI= 856.11	FE=089
93	86.00	1.0000E+ 0	1.1000E+ 0	KI= 860.01	FE=090
94	86.22	1.0000E+ 0	1.1000E+ 0	KI= 862.21	FE=091
95	86.38	1.0000E+ 0	1.1000E+ 0	KI= 863.81	FE=092
96	86.50	1.0000E+ 0	1.1000E+ 0	KI= 865.01	FE=093
97	86.74	1.0000E+ 0	1.1000E+ 0	KI= 867.41	FE=094
98	86.95	1.0000E+ 0	1.1000E+ 0	KI= 869.51	FE=095
99	87.12	1.0000E+ 0	1.1000E+ 0	KI= 871.21	FE=096
100	87.31	1.0000E+ 0	1.1000E+ 0	KI= 873.11	FE=097
101	87.71	1.0000E+ 0	1.1000E+ 0	KI= 877.11	FE=098
102	88.00	1.0000E+ 0	1.1000E+ 0	KI= 880.01	FE=099
103	88.16	1.0000E+ 0	1.1000E+ 0	KI= 881.61	FE=100
104	88.45	1.0000E+ 0	1.1000E+ 0	KI= 884.51	FE=102
105	88.73	1.0000E+ 0	1.1000E+ 0	KI= 887.41	FE=103
106	89.09	1.0000E+ 0	1.1000E+ 0	KI= 890.91	FE=104
107	89.26	1.0000E+ 0	1.1000E+ 0	KI= 892.61	FE=105
108	89.46	1.0000E+ 0	1.1000E+ 0	KI= 894.61	FE=106
109	89.59	1.0000E+ 0	1.1000E+ 0	KI= 895.91	FE=107
110	89.76	1.0000E+ 0	1.1000E+ 0	KI= 897.61	FE=108
111	90.00	1.0000E+ 0	1.1000E+ 0	8900-n-C9-ANE	FE=109
112	90.13	1.0000E+ 0	1.1000E+ 0	KI= 901.31	FE=110
113	90.84	1.0000E+ 0	1.1000E+ 0	KI= 908.41	FE=112
114	91.08	1.0000E+ 0	1.1000E+ 0	KI= 910.81	FE=113
115	91.39	1.0000E+ 0	1.1000E+ 0	KI= 913.91	FE=114
116	91.54	1.0000E+ 0	1.1000E+ 0	KI= 915.41	FE=115
117	91.76	1.0000E+ 0	1.1000E+ 0	KI= 917.71	FE=116
118	92.01	1.0000E+ 0	1.1000E+ 0	KI= 920.11	FE=117
119	92.26	1.0000E+ 0	1.1000E+ 0	KI= 922.61	FE=118
120	92.47	1.0000E+ 0	1.1000E+ 0	KI= 924.71	FE=119
121	92.91	1.0000E+ 0	1.1000E+ 0	KI= 929.11	FE=120
122	93.35	1.0000E+ 0	1.1000E+ 0	KI= 933.51	FE=122
123	93.92	1.0000E+ 0	1.1000E+ 0	KI= 939.41	FE=123
124	94.13	1.0000E+ 0	1.1000E+ 0	KI= 941.01	FE=124
125	94.53	1.0000E+ 0	1.1000E+ 0	KI= 945.31	FE=125
126	94.74	1.0000E+ 0	1.1000E+ 0	KI= 947.41	FE=126
127	95.20	1.0000E+ 0	1.1000E+ 0	KI= 952.01	FE=127
128	95.35	1.0000E+ 0	1.1000E+ 0	KI= 953.51	FE=128
129	95.58	1.0000E+ 0	1.1000E+ 0	KI= 955.81	FE=129
130	95.68	1.0000E+ 0	1.1000E+ 0	KI= 956.81	FE=130
131	96.05	1.0000E+ 0	1.1000E+ 0	KI= 960.51	FE=131
132	96.21	1.0000E+ 0	1.1000E+ 0	KI= 962.11	FE=132
133	96.47	1.0000E+ 0	1.1000E+ 0	KI= 964.71	FE=133
134	96.61	1.0000E+ 0	1.1000E+ 0	KI= 966.11	FE=134
135	96.74	1.0000E+ 0	1.1000E+ 0	KI= 967.41	FE=135
136	97.08	1.0000E+ 0	1.1000E+ 0	KI= 970.81	FE=136
137	97.27	1.0000E+ 0	1.1000E+ 0	KI= 972.71	FE=137
138	97.49	1.0000E+ 0	1.1000E+ 0	KI= 974.91	FE=138
139	97.69	1.0000E+ 0	1.1000E+ 0	KI= 976.91	FE=139
140	97.92	1.0000E+ 0	1.1000E+ 0	KI= 979.21	FE=140
141	98.01	1.0000E+ 0	1.1000E+ 0	KI= 980.21	FE=141
142	98.17	1.0000E+ 0	1.1000E+ 0	KI= 981.71	FE=142
143	98.33	1.0000E+ 0	1.1000E+ 0	KI= 983.31	FE=143
144	98.62	1.0000E+ 0	1.1000E+ 0	KI= 986.21	FE=144
145	98.90	1.0000E+ 0	1.1000E+ 0	KI= 989.01	FE=145
146	99.35	1.0000E+ 0	1.1000E+ 0	KI= 993.51	FE=146
147	99.53	1.0000E+ 0	1.1000E+ 0	KI= 995.31	FE=147

TABLE 16 (continued)

148	99.68	1.0000E+	0.	1.1000E+	0.	KI= 996.81	FE=148
149	100.00	1.0000E+	0.	1.1000E+	0.	\$1000-n-C10-ANE	FE=149
150	100.39	1.0000E+	0.	1.1000E+	0.	KI=1003.91	FE=150
151	100.90	1.0000E+	0.	1.1000E+	0.	KI=1009.01	FE=151
152	101.39	1.0000E+	0.	1.1000E+	0.	KI=1013.91	FE=152
153	101.70	1.0000E+	0.	1.1000E+	0.	KI=1017.01	FE=153
154	101.93	1.0000E+	0.	1.1000E+	0.	KI=1019.31	FE=154
155	102.01	1.0000E+	0.	1.1000E+	0.	KI=1020.11	FE=155
156	102.29	1.0000E+	0.	1.1000E+	0.	KI=1022.91	FE=156
157	102.58	1.0000E+	0.	1.1000E+	0.	KI=1025.81	FE=157
158	102.84	1.0000E+	0.	1.1000E+	0.	KI=1028.41	FE=158
159	103.16	1.0000E+	0.	1.1000E+	0.	KI=1031.61	FE=159
160	103.34	1.0000E+	0.	1.1000E+	0.	KI=1033.41	FE=160
161	103.46	1.0000E+	0.	1.1000E+	0.	KI=1034.61	FE=161
162	103.66	1.0000E+	0.	1.1000E+	0.	KI=1036.61	FE=162
163	103.85	1.0000E+	0.	1.1000E+	0.	KI=1038.51	FE=163
164	104.06	1.0000E+	0.	1.1000E+	0.	KI=1040.61	FE=164
165	104.32	1.0000E+	0.	1.1000E+	0.	KI=1043.21	FE=165
166	104.47	1.0000E+	0.	1.1000E+	0.	KI=1044.71	FE=166
167	104.64	1.0000E+	0.	1.1000E+	0.	KI=1046.41	FE=167
168	104.94	1.0000E+	0.	1.1000E+	0.	KI=1049.41	FE=168
169	105.06	1.0000E+	0.	1.1000E+	0.	KI=1050.61	FE=169
170	105.38	1.0000E+	0.	1.1000E+	0.	KI=1053.81	FE=170
171	105.57	1.0000E+	0.	1.1000E+	0.	KI=1055.31	FE=171
172	105.79	1.0000E+	0.	1.1000E+	0.	KI=1057.91	FE=172
173	106.08	1.0000E+	0.	1.1000E+	0.	KI=1060.81	FE=173
174	106.46	1.0000E+	0.	1.1000E+	0.	KI=1064.61	FE=174
175	106.62	1.0000E+	0.	1.1000E+	0.	KI=1066.21	FE=175
176	107.06	1.0000E+	0.	1.1000E+	0.	KI=1070.61	FE=176
177	107.28	1.0000E+	0.	1.1000E+	0.	KI=1072.81	FE=177
178	107.90	1.0000E+	0.	1.1000E+	0.	KI=1079.01	FE=178
179	108.16	1.0000E+	0.	1.1000E+	0.	KI=1081.61	FE=179
180	108.43	1.0000E+	0.	1.1000E+	0.	KI=1084.31	FE=180
181	108.72	1.0000E+	0.	1.1000E+	0.	KI=1087.21	FE=181
182	108.94	1.0000E+	0.	1.1000E+	0.	KI=1089.41	FE=182
183	109.08	1.0000E+	0.	1.1000E+	0.	KI=1090.81	FE=183
184	109.38	1.0000E+	0.	1.1000E+	0.	KI=1093.81	FE=184
185	109.60	1.0000E+	0.	1.1000E+	0.	KI=1096.01	FE=185
186	110.00	1.0000E+	0.	1.1000E+	0.	\$1100-n-C11-ANE	FE=186
187	110.17	1.0000E+	0.	1.1000E+	0.	KI=1101.71	FE=187
188	110.45	1.0000E+	0.	1.1000E+	0.	KI=1104.41	FE=188
189	110.66	1.0000E+	0.	1.1000E+	0.	KI=1106.61	FE=189
190	110.84	1.0000E+	0.	1.1000E+	0.	KI=1108.41	FE=190
191	111.03	1.0000E+	0.	1.1000E+	0.	KI=1110.31	FE=191
192	111.26	1.0000E+	0.	1.1000E+	0.	KI=1112.51	FE=192
193	111.58	1.0000E+	0.	1.1000E+	0.	KI=1115.81	FE=193
194	111.77	1.0000E+	0.	1.1000E+	0.	KI=1117.71	FE=194
195	111.97	1.0000E+	0.	1.1000E+	0.	KI=1119.71	FE=195
196	112.35	1.0000E+	0.	1.1000E+	0.	KI=1123.41	FE=196
197	112.70	1.0000E+	0.	1.1000E+	0.	KI=1127.01	FE=197
198	112.94	1.0000E+	0.	1.1000E+	0.	KI=1129.41	FE=198
199	113.27	1.0000E+	0.	1.1000E+	0.	KI=1132.71	FE=199
200	113.36	1.0000E+	0.	1.1000E+	0.	KI=1133.71	FE=200
201	113.50	1.0000E+	0.	1.1000E+	0.	KI=1135.01	FE=201
202	113.71	1.0000E+	0.	1.1000E+	0.	KI=1137.11	FE=202
203	113.97	1.0000E+	0.	1.1000E+	0.	KI=1139.71	FE=203
204	114.10	1.0000E+	0.	1.1000E+	0.	KI=1141.01	FE=204
205	114.40	1.0000E+	0.	1.1000E+	0.	KI=1144.01	FE=205
206	114.83	1.0000E+	0.	1.1000E+	0.	KI=1148.31	FE=206
207	114.98	1.0000E+	0.	1.1000E+	0.	KI=1149.81	FE=207
208	115.26	1.0000E+	0.	1.1000E+	0.	KI=1152.61	FE=208

TABLE 16 (continued)

209	115.50.	1.0000E+	0.	1.1000E+	0.	KI=1155.01	FE=211
210	115.61.	1.0000E+	0.	1.1000E+	0.	KI=1156.11	FE=212
211	115.80.	1.0000E+	0.	1.1000E+	0.	KI=1158.01	FE=213
212	115.99.	1.0000E+	0.	1.1000E+	0.	KI=1159.81	FE=214
213	116.18.	1.0000E+	0.	1.1000E+	0.	KI=1161.81	FE=215
214	116.42.	1.0000E+	0.	1.1000E+	0.	KI=1164.21	FE=216
215	117.04.	1.0000E+	0.	1.1000E+	0.	KI=1170.41	FE=217
216	117.14.	1.0000E+	0.	1.1000E+	0.	KI=1171.41	FE=218
217	117.59.	1.0000E+	0.	1.1000E+	0.	KI=1175.91	FE=219
218	117.97.	1.0000E+	0.	1.1000E+	0.	KI=1179.71	FE=220
219	118.14.	1.0000E+	0.	1.1000E+	0.	KI=1181.41	FE=221
220	118.53.	1.0000E+	0.	1.1000E+	0.	KI=1185.31	FE=222
221	118.96.	1.0000E+	0.	1.1000E+	0.	KI=1189.61	FE=223
222	119.15.	1.0000E+	0.	1.1000E+	0.	KI=1191.51	FE=224
223	119.39.	1.0000E+	0.	1.1000E+	0.	KI=1193.91	FE=225
224	119.53.	1.0000E+	0.	1.1000E+	0.	KI=1195.41	FE=226
225	120.00.	1.0000E+	0.	1.1000E+	0.	§1200-n-C12-ANE	FE=227
226	120.34.	1.0000E+	0.	1.1000E+	0.	KI=1203.41	FE=228
227	120.56.	1.0000E+	0.	1.1000E+	0.	KI=1205.61	FE=229
228	120.71.	1.0000E+	0.	1.1000E+	0.	KI=1207.21	FE=230
229	121.09.	1.0000E+	0.	1.1000E+	0.	KI=1210.91	FE=231
230	121.42.	1.0000E+	0.	1.1000E+	0.	KI=1214.21	FE=232
231	121.82.	1.0000E+	0.	1.1000E+	0.	KI=1218.21	FE=233
232	122.00.	1.0000E+	0.	1.1000E+	0.	KI=1220.01	FE=234
233	122.17.	1.0000E+	0.	1.1000E+	0.	KI=1221.71	FE=235
234	122.43.	1.0000E+	0.	1.1000E+	0.	KI=1224.31	FE=236
235	122.78.	1.0000E+	0.	1.1000E+	0.	KI=1227.81	FE=237
236	123.39.	1.0000E+	0.	1.1000E+	0.	KI=1233.91	FE=238
237	123.86.	1.0000E+	0.	1.1000E+	0.	KI=1238.61	FE=239
238	124.17.	1.0000E+	0.	1.1000E+	0.	KI=1241.71	FE=240
239	124.54.	1.0000E+	0.	1.1000E+	0.	KI=1245.41	FE=241
240	124.85.	1.0000E+	0.	1.1000E+	0.	KI=1248.51	FE=242
241	125.28.	1.0000E+	0.	1.1000E+	0.	KI=1252.81	FE=243
242	125.48.	1.0000E+	0.	1.1000E+	0.	KI=1254.81	FE=244
243	125.93.	1.0000E+	0.	1.1000E+	0.	KI=1259.31	FE=245
244	126.40.	1.0000E+	0.	1.1000E+	0.	KI=1264.01	FE=246
245	126.76.	1.0000E+	0.	1.1000E+	0.	KI=1267.61	FE=247
246	127.02.	1.0000E+	0.	1.1000E+	0.	KI=1270.21	FE=248
247	127.31.	1.0000E+	0.	1.1000E+	0.	KI=1273.11	FE=249
248	127.61.	1.0000E+	0.	1.1000E+	0.	KI=1276.11	FE=250
249	127.76.	1.0000E+	0.	1.1000E+	0.	KI=1277.51	FE=251
250	128.27.	1.0000E+	0.	1.1000E+	0.	KI=1282.71	FE=253
251	128.56.	1.0000E+	0.	1.1000E+	0.	KI=1285.61	FE=254
252	128.83.	1.0000E+	0.	1.1000E+	0.	KI=1288.31	FE=255
253	129.42.	1.0000E+	0.	1.1000E+	0.	KI=1294.21	FE=256
254	130.00.	1.0000E+	0.	1.1000E+	0.	§1300-n-C13-ANE	FE=257
255	130.42.	1.0000E+	0.	1.1000E+	0.	KI=1304.41	FE=258
256	130.96.	1.0000E+	0.	1.1000E+	0.	KI=1309.61	FE=259
257	131.16.	1.0000E+	0.	1.1000E+	0.	KI=1311.51	FE=260
258	131.80.	1.0000E+	0.	1.1000E+	0.	KI=1318.01	FE=262
259	132.31.	1.0000E+	0.	1.1000E+	0.	KI=1323.11	FE=263
260	132.80.	1.0000E+	0.	1.1000E+	0.	KI=1328.01	FE=264
261	133.34.	1.0000E+	0.	1.1000E+	0.	KI=1333.41	FE=265
262	133.85.	1.0000E+	0.	1.1000E+	0.	KI=1338.41	FE=266
263	134.22.	1.0000E+	0.	1.1000E+	0.	KI=1342.21	FE=267
264	134.45.	1.0000E+	0.	1.1000E+	0.	KI=1344.51	FE=268
265	134.75.	1.0000E+	0.	1.1000E+	0.	KI=1347.51	FE=269
266	135.11.	1.0000E+	0.	1.1000E+	0.	KI=1351.11	FE=270
267	135.41.	1.0000E+	0.	1.1000E+	0.	KI=1354.01	FE=271
268	135.89.	1.0000E+	0.	1.1000E+	0.	KI=1358.91	FE=272
269	136.40.	1.0000E+	0.	1.1000E+	0.	KI=1364.01	FE=273

TABLE 16 (Concluded)

270	137.03,	1.0000E+	0.	1.1000E+	0.	KI=1370.31	FE=274
271	137.67,	1.0000E+	0.	1.1000E+	0.	KI=1376.71	FE=275
272	138.30,	1.0000E+	0.	1.1000E+	0.	KI=1383.01	FE=276
273	138.86,	1.0000E+	0.	1.1000E+	0.	KI=1388.61	FE=277
274	139.34,	1.0000E+	0.	1.1000E+	0.	KI=1393.41	FE=278
275	140.00,	1.0000E+	0.	1.1000E+	0.	#1400-n-C14-ANE	FE=279
276	140.40,	1.0000E+	0.	1.1000E+	0.	KI=1404.01	FE=280
277	140.79,	1.0000E+	0.	1.1000E+	0.	KI=1407.91	FE=281
278	141.11,	1.0000E+	0.	1.1000E+	0.	KI=1411.11	FE=282
279	141.36,	1.0000E+	0.	1.1000E+	0.	KI=1413.61	FE=283
280	142.20,	1.0000E+	0.	1.1000E+	0.	KI=1422.01	FE=285
281	142.72,	1.0000E+	0.	1.1000E+	0.	KI=1427.21	FE=286
282	143.03,	1.0000E+	0.	1.1000E+	0.	KI=1430.31	FE=287
283	143.42,	1.0000E+	0.	1.1000E+	0.	KI=1434.11	FE=288
284	144.32,	1.0000E+	0.	1.1000E+	0.	KI=1443.21	FE=289
285	144.61,	1.0000E+	0.	1.1000E+	0.	KI=1446.11	FE=290
286	145.05,	1.0000E+	0.	1.1000E+	0.	KI=1450.51	FE=291
287	145.35,	1.0000E+	0.	1.1000E+	0.	KI=1453.41	FE=292
288	145.87,	1.0000E+	0.	1.1000E+	0.	KI=1458.71	FE=293
289	146.27,	1.0000E+	0.	1.1000E+	0.	KI=1462.71	FE=294
290	147.07,	1.0000E+	0.	1.1000E+	0.	KI=1470.71	FE=295
291	150.00,	1.0000E+	0.	1.1000E+	0.	#1500-n-C15-ANE	FE=296
292	160.00,	1.0000E+	0.	1.1000E+	0.	C1600-n-C16-ANE	FE=297
293	176.80,	1.0000E+	0.	1.1000E+	0.	&ANTH-d10(1S)(KI=1772)	
294	211.00,	1.0000E+	0.	1.1000E+	0.	#2118-(IMPURITY #3)	
295	530.00,	1.0000E+	0.	1.1000E+	0.	#5300-NO R.T. UPDATE	
296	/E						

### 3. USER PROGRAMS

POST-ANAL DIALG-PRG PARAM-FILE  
/N

### 4. REPORTS

RD/C NRPTS  
1 T7. 1  
2 /E

DONE



TABLE 17. REP6 FOR A DATA BASE CONTAINING 14 BKPxxx FILES CREATED BY DFARME  
DATA ANALYSES OF 14 REPLICATE REFERENCE JP-4 FUKLS ANALYSES

STATISTICAL SUMMARY OF M406 DATA BASE

CONSISTING OF 14 SAMPLES

CONCENTRATION (mg/mL)

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	STANDARD	NUMBER
					DEVIATION	OF SAMPLES
KI= 377.21	FE=001	1.11E-01	3.74E-02	1.31E-02	1.18E+01	10 *
KI= 388.01	FE=002	3.77E-01	1.64E-01	5.42E-02	1.44E+01	14 *
8400-n-C4-ANE1	FE=003	1.20E+00	4.47E-01	1.40E-01	1.17E+01	14 **
KI= 457.61	FE=004	5.30E+00	1.35E+00	3.67E-01	6.95E+00	14
8500-n-C5-ANE1	FE=005	8.08E+00	1.84E+00	5.05E-01	6.26E+00	14
KI= 507.01	FE=006	1.19E-01	4.82E-02	1.48E-02	1.24E+01	10 *
KI= 511.21	FE=007	1.37E-01	8.14E-02	8.75E-02	4.21E+01	2 *
KI= 514.31	FE=008	1.37E-01	9.22E-02	3.03E-02	2.28E+01	9 *
KI= 520.11	FE=009	7.00E-01	2.48E-01	5.66E-02	8.09E+00	14 **
CH2CL2 SOLVENT		0.00E+00	0.00E+00	0.00E+00	1.70E+38	14
KI= 549.71	FE=010	1.29E+00	2.94E-01	7.25E-02	5.61E+00	14 **
KI= 552.41	FE=011	1.54E+00	3.37E-01	8.62E-02	5.52E+00	14 **
IMPURITY 81(KI= 558.6)		1.55E-01	1.04E-01	4.30E-02	2.77E+01	13 *
KI= 560.41	FE=012	9.31E+00	1.51E+00	4.27E-01	4.59E+00	14
KI= 577.31	FE=013	6.47E+00	1.14E+00	3.10E-01	4.79E+00	14
8600-n-C6-ANE1	FE=014	1.59E+01	2.79E+00	7.45E-01	4.70E+00	14
KI= 609.21	FE=015	9.27E-02	1.34E-02	6.94E-03	7.49E+00	3 *
KI= 611.21	FE=016	1.09E-01	3.86E-02	1.11E-02	1.02E+01	13 *
KI= 613.91	FE=017	1.73E-01	6.85E-02	1.76E-02	1.02E+01	13 *
KI= 624.81	FE=018	8.43E+00	1.42E+00	3.78E-01	4.49E+00	14
KI= 627.31	FE=019	1.08E-01	2.98E-02	9.57E-03	8.82E+00	12 *
KI= 632.41	FE=020	1.44E+00	2.99E-01	7.59E-02	4.64E+00	14 **
KI= 653.01	FE=021	9.37E-01	1.77E-01	4.62E-02	4.93E+00	14 **

TABLE 17 (continued)

KI= 656.11	FE=022	7.99E+00	1.31E+00	3.48E-01	4.34E+00	14
KI= 658.81	FE=023	3.64E+00	1.11E+00	2.84E-01	7.83E+00	14
KI= 669.01	FE=024	4.67E+00	8.02E-01	2.07E-01	4.44E+00	14
KI= 670.41	FE=025	1.14E+01	1.87E+00	5.02E-01	4.37E+00	14
IMPURITY 82(KI= 674.4)		7.52E-01	9.18E-02	2.34E-02	3.14E+00	14 **
KI= 677.41	FE=026	1.38E+01	2.23E+00	5.94E-01	4.31E+00	14
KI= 679.81	FE=027	2.44E+00	4.07E-01	1.03E-01	4.29E+00	14
KI= 682.01	FE=028	2.35E+00	3.73E-01	9.92E-02	4.21E+00	14
KI= 684.61	FE=029	4.27E+00	6.80E-01	1.80E-01	4.22E+00	14
KI= 685.81	FE=030	1.33E+00	2.13E-01	5.48E-02	4.28E+00	14 **
9700-n-C7-ANE:	FE=031	2.51E+01	4.00E+00	1.04E+00	4.21E+00	14
KI= 701.81	FE=032	1.44E-01	4.87E-02	1.41E-02	1.12E+01	8 *
KI= 705.01	FE=033	1.04E-01	2.59E-02	9.00E-03	8.61E+00	14 *
KI= 706.71	FE=034	8.85E-02	5.41E-03	2.33E-03	2.63E+00	4 *
KI= 708.01	FE=035	1.69E-01	8.34E-02	2.54E-02	1.80E+01	14 *
KI= 712.51	FE=036	1.59E+01	2.51E+00	6.62E-01	4.14E+00	14
KI= 715.61	FE=037	1.44E+00	2.33E-01	6.84E-02	4.76E+00	14 **
KI= 719.11	FE=038	1.04E+00	1.53E-01	4.39E-02	4.22E+00	14 **
KI= 725.81	FE=039	1.62E+00	2.34E-01	6.48E-02	4.01E+00	14 **
KI= 730.01	FE=040	2.40E+00	4.13E-01	1.07E-01	4.43E+00	14
KI= 731.01	FE=041	4.04E+00	6.02E-01	1.63E-01	4.02E+00	14
KI= 733.61	FE=042	1.61E+00	2.55E-01	6.70E-02	4.16E+00	14 **
KI= 735.01	FE=043	1.46E+00	2.27E-01	6.01E-02	4.12E+00	14 **
KI= 741.21	FE=044	1.53E+00	2.34E-01	6.49E-02	4.18E+00	14 **
KI= 743.31	FE=045	4.94E-01	9.23E-02	2.42E-02	4.89E+00	14 **
KI= 745.41	FE=046	4.45E-01	1.61E-01	4.63E-02	1.04E+01	14 **
KI= 749.91	FE=047	1.32E-01	2.10E-02	6.34E-03	4.79E+00	14 *
KI= 753.91	FE=048	5.97E-01	8.91E-02	2.83E-02	4.74E+00	14 **
KI= 757.11	FE=049	4.28E+00	6.44E-01	1.74E-01	4.10E+00	14
KI= 758.81	FE=050	8.51E+00	1.24E+00	3.53E-01	4.18E+00	14
KI= 762.01	FE=051	2.97E-01	4.83E-02	1.32E-02	4.44E+00	14 *

TABLE 17 (continued)

KI= 765.31	FE=052	1.79E+01	2.60E+00	7.00E-01	4.10E+00	14
KI= 766.41	FE=053	7.00E+00	1.04E+00	2.81E-01	4.01E+00	14
KI= 768.81	FE=054	4.66E+00	6.96E-01	1.90E-01	4.00E+00	14
KI= 770.61	FE=055	2.51E+00	3.70E-01	1.02E-01	4.04E+00	14
KI= 772.41	FE=056	2.03E+01	3.03E+00	8.23E-01	4.06E+00	14
KI= 775.21	FE=057	8.37E-01	1.24E-01	3.29E-02	3.94E+00	14 **
KI= 781.01	FE=058	1.13E+00	1.69E-01	4.61E-02	4.09E+00	14 **
KI= 783.21	FE=059	6.87E-01	9.94E-02	2.81E-02	4.09E+00	14 **
KI= 784.41	FE=060	1.28E+00	2.59E-01	7.01E-02	5.48E+00	14 **
KI= 785.41	FE=061	1.42E-01	4.24E-02	1.17E-02	8.29E+00	11 *
KI= 786.91	FE=062	2.53E+00	3.68E-01	1.05E-01	4.14E+00	14
KI= 791.11	FE=063	9.37E-02	3.26E-02	8.93E-03	9.54E+00	10 **
KI= 794.41	FE=064	6.16E-01	1.31E-01	3.94E-02	6.39E+00	14 **
KI= 795.71	FE=065	1.46E+00	3.20E-01	8.81E-02	6.04E+00	14 **
9800-n-C8-ANE1	FE=066	2.70E+01	4.15E+00	1.13E+00	4.20E+00	14
KI= 802.51	FE=067	9.73E-02	3.74E-02	1.06E-02	1.09E+01	11 *
KI= 805.71	FE=068	1.30E-01	3.21E-02	9.23E-03	7.12E+00	13 *
KI= 807.11	FE=069	2.43E-01	7.26E-02	1.96E-02	8.07E+00	14 *
KI= 808.91	FE=070	9.40E-02	2.10E-02	7.39E-03	7.86E+00	8 *
KI= 812.31	FE=071	5.66E-01	7.75E-02	2.28E-02	4.04E+00	14 **
KI= 813.61	FE=072	2.77E-01	3.90E-02	1.20E-02	4.35E+00	14 *
KI= 817.01	FE=073	9.04E-01	1.01E-01	3.76E-02	4.16E+00	14 **
KI= 818.21	FE=074	8.01E-01	1.30E-01	3.72E-02	4.64E+00	14 **
KI= 821.31	FE=075	2.20E+00	4.03E-01	1.05E-01	4.77E+00	14
KI= 824.21	FE=076	3.61E+00	1.26E+00	4.25E-01	1.10E+01	14
KI= 825.71	FE=077	1.71E+00	1.35E+01	3.46E+00	2.02E+02	14 **
KI= 828.11	FE=078	5.59E+00	8.23E-01	2.37E-01	4.24E+00	13
KI= 834.41	FE=079	6.32E+00	8.77E-01	2.60E-01	4.11E+00	13
KI= 837.01	FE=080	2.45E-01	4.21E-02	1.41E-02	5.77E+00	13 *
KI= 840.81	FE=081	2.16E-01	4.64E-02	1.21E-02	5.62E+00	14 *
KI= 842.71	FE=082	2.00E+00	2.84E-01	8.36E-02	4.03E+00	14

TABLE 17 (continued)

KI= 844.21	FE=083	5.97E-01	8.50E-02	2.51E-02	4.20E+00	14 **
KI= 846.21	FE=084	2.54E-01	4.29E-02	1.09E-02	4.24E+00	14 *
KI= 848.21	FE=085	1.32E-01	3.18E-02	8.23E-03	6.24E+00	14 *
KI= 850.91	FE=086	9.64E-02	3.01E-02	1.17E-02	1.22E+01	6 *
KI= 852.81	FE=087	1.77E-01	4.44E-02	1.10E-02	6.21E+00	14 *
KI= 854.41	FE=088	4.62E+00	6.32E-01	1.90E-01	4.11E+00	14
KI= 856.11	FE=089	1.77E+00	2.67E-01	7.44E-02	4.22E+00	14 **
KI= 860.01	FE=090	1.11E+00	1.67E-01	4.74E-02	4.24E+00	14 **
KI= 862.21	FE=091	8.30E+00	1.29E+00	3.74E-01	4.53E+00	14
KI= 863.81	FE=092	5.52E+00	6.84E-01	2.10E-01	3.81E+00	14
KI= 865.01	FE=093	6.44E+00	8.29E-01	2.54E-01	3.93E+00	14
KI= 867.41	FE=094	3.99E-01	8.26E-02	2.50E-02	6.93E+00	14 *
KI= 869.51	FE=095	1.46E+00	1.99E-01	6.14E-02	4.20E+00	14 **
KI= 871.21	FE=096	7.23E+00	9.73E-01	2.93E-01	4.04E+00	14
KI= 873.11	FE=097	3.68E-01	1.26E-01	3.61E-02	9.87E+00	14 *
KI= 877.11	FE=098	4.14E-01	5.40E-02	1.89E-02	4.56E+00	14 **
KI= 880.01	FE=099	2.89E+00	3.87E-01	1.14E-01	3.94E+00	14
KI= 881.61	FE=100	1.12E+00	1.49E-01	4.90E-02	4.36E+00	14 **
KI= 884.51	FE=102	3.60E+00	5.04E-01	1.45E-01	4.03E+00	14
KI= 887.41	FE=103	3.03E-01	1.33E-01	3.42E-02	1.13E+01	14 *
KI= 890.91	FE=104	2.74E-01	5.62E-02	2.08E-02	7.60E+00	14 *
KI= 892.61	FE=105	1.59E-01	5.82E-02	1.57E-02	9.89E+00	14 *
KI= 894.61	FE=106	4.30E-01	8.83E-02	2.29E-02	5.33E+00	14 **
KI= 895.91	FE=107	4.22E-01	8.10E-02	2.23E-02	5.35E+00	14 **
KI= 897.61	FE=108	8.31E-01	1.04E-01	3.23E-02	3.91E+00	14 **
8900-n-CV-ANE1	FE=109	1.63E+01	2.20E+00	6.99E-01	4.30E+00	14
KI= 901.31	FE=110	1.57E-01	2.44E-02	9.73E-03	6.20E+00	7 *
KI= 908.41	FE=112	1.17E+00	2.52E-01	7.58E-02	6.47E+00	14 **
KI= 910.81	FE=113	7.29E-01	2.72E-01	1.04E-01	1.44E+01	14 **
KI= 913.91	FE=114	4.23E-01	2.64E-01	1.03E-01	2.43E+01	14 **
KI= 915.41	FE=115	3.17E-01	2.38E-01	6.84E-02	2.16E+01	14 *

TABLE 17 (continued)

KI= 917.71	FE=116	1.42E+00	1.77E+00	4.97E-01	3.50E+01	14	**
KI= 920.11	FE=117	4.84E-01	2.17E-01	6.84E-02	1.42E+01	14	**
KI= 922.41	FE=118	2.18E+00	3.71E-01	1.15E-01	5.29E+00	14	
KI= 924.71	FE=119	1.21E+00	2.07E-01	6.44E-02	5.33E+00	14	**
KI= 929.11	FE=120	1.78E+00	3.67E-01	1.02E-01	5.74E+00	14	**
KI= 933.51	FE=122	3.79E+00	9.47E-01	3.26E-01	8.60E+00	14	
KI= 939.41	FE=123	2.58E+00	8.72E-01	3.30E-01	1.28E+01	14	
KI= 941.01	FE=124	3.24E-01	2.94E-01	1.99E-01	4.90E+01	3	*
KI= 945.31	FE=125	1.35E+00	2.53E-01	7.43E-02	5.48E+00	14	**
KI= 947.41	FE=126	1.26E+00	1.84E-01	5.83E-02	4.62E+00	14	**
KI= 952.01	FE=127	8.34E-01	1.29E-01	4.02E-02	4.80E+00	14	**
KI= 953.51	FE=128	1.49E+00	2.10E-01	6.90E-02	4.61E+00	14	**
KI= 955.81	FE=129	4.19E+00	1.63E+00	3.98E-01	9.50E+00	14	
KI= 956.81	FE=130	1.46E+00	3.87E-01	1.25E-01	8.55E+00	13	**
KI= 960.51	FE=131	9.21E-01	2.90E-01	1.04E-01	1.12E+01	14	**
KI= 962.11	FE=132	4.65E+00	9.07E-01	3.08E-01	4.63E+00	14	
KI= 964.71	FE=133	2.57E+00	1.01E+00	3.90E-01	1.52E+01	14	
KI= 966.11	FE=134	3.28E-01	7.44E-02	2.72E-02	8.29E+00	6	*
KI= 967.41	FE=135	1.05E+00	1.25E+00	4.54E-01	4.94E+01	14	**
KI= 970.81	FE=136	2.34E+00	3.60E-01	1.11E-01	4.76E+00	14	
KI= 972.71	FE=137	1.54E+00	2.52E-01	8.07E-02	5.16E+00	14	**
KI= 974.91	FE=138	1.31E-01	8.54E-02	3.12E-02	2.38E+01	13	*
KI= 976.91	FE=139	1.48E+00	2.57E-01	8.43E-02	5.69E+00	14	**
KI= 979.21	FE=140	1.23E+00	5.31E-01	1.54E-01	1.25E+01	14	**
KI= 980.21	FE=141	3.59E-01	4.63E-02	2.01E-02	5.62E+00	4	*
KI= 981.71	FE=142	5.34E-01	1.22E-01	4.13E-02	7.74E+00	14	**
KI= 983.31	FE=143	2.24E-01	8.27E-02	2.94E-02	1.32E+01	14	*
KI= 986.21	FE=144	7.16E+00	9.95E-01	2.97E-01	4.15E+00	14	
KI= 989.01	FE=145	8.30E-01	2.03E-01	5.72E-02	6.89E+00	14	**
KI= 993.51	FE=146	8.71E-01	6.04E-01	1.63E-01	1.87E+01	14	**
KI= 995.31	FE=147	2.54E-01	1.92E-01	6.89E-02	5.70E+01	14	*

TABLE 17 (continued)

KI= 996.81	FE=148	2.43E-01	1.78E-01	4.40E-02	1.81E+01	12 *
61000-n-C10-A-NE	FE=149	1.30E+01	2.08E+00	5.72E-01	4.39E+00	14
KI=1003.91	FE=150	6.84E-01	1.73E-01	4.37E-02	6.37E+00	14 **
KI=1009.01	FE=151	1.80E-01	3.70E-01	1.44E-01	7.99E+01	7 *
KI=1013.91	FE=152	3.61E+00	6.31E-01	1.92E-01	5.33E+00	14
KI=1017.01	FE=153	1.33E+00	2.79E-01	7.74E-02	5.81E+00	14 **
KI=1019.31	FE=154	4.94E-01	5.13E-02	2.59E-02	5.23E+00	3 **
KI=1020.11	FE=155	9.61E-01	5.01E-01	1.64E-01	1.71E+01	14 **
KI=1022.91	FE=156	2.94E+00	3.93E-01	1.30E-01	4.41E+00	14
KI=1025.81	FE=157	2.13E+00	3.17E-01	9.54E-02	4.50E+00	14
KI=1028.41	FE=158	1.37E+00	4.84E-01	1.27E-01	9.24E+00	14 **
KI=1031.61	FE=159	8.43E-01	5.10E-01	1.47E-01	1.74E+01	14 **
KI=1033.41	FE=160	3.43E-01	1.03E-01	4.24E-02	1.23E+01	12 *
KI=1034.61	FE=161	6.72E-01	6.18E-01	1.90E-01	2.83E+01	14 **
KI=1036.61	FE=162	2.97E-01	2.64E-01	8.54E-02	2.87E+01	14 *
KI=1038.51	FE=163	7.65E-01	2.98E-01	1.04E-01	1.38E+01	14 **
KI=1040.61	FE=164	1.71E-01	1.69E-01	7.42E-02	4.33E+01	13 *
KI=1043.21	FE=165	1.33E+00	4.37E-01	1.71E-01	1.73E+01	14 **
KI=1044.71	FE=166	4.97E-01	1.94E-01	8.10E-02	1.63E+01	14 **
KI=1046.41	FE=167	2.10E+00	6.44E-01	2.42E-01	1.18E+01	14
KI=1049.41	FE=168	7.87E-01	3.35E-01	1.37E-01	1.74E+01	14 **
KI=1050.61	FE=169	1.27E+00	6.05E-01	2.48E-01	1.93E+01	14 **
KI=1053.81	FE=170	1.75E+00	1.12E+00	4.25E-01	2.42E+01	14 **
KI=1055.31	FE=171	3.43E-01	1.24E-01	6.54E-02	1.90E+01	4 *
KI=1057.91	FE=173	1.40E+00	3.38E-01	2.19E-01	1.54E+01	14 **
KI=1060.81	FE=174	2.15E+00	4.05E-01	1.34E-01	6.24E+00	14
KI=1064.61	FE=175	2.49E+00	3.24E-01	1.01E-01	4.04E+00	14
KI=1064.21	FE=176	6.12E-01	9.54E-02	2.61E-02	4.26E+00	14 **
KI=1070.61	FE=177	3.25E+00	4.17E-01	1.24E-01	3.87E+00	14
KI=1072.81	FE=178	1.82E+00	2.47E-01	7.84E-02	4.30E+00	14 **
KI=1079.01	FE=179	3.11E+00	4.21E-01	1.24E-01	3.99E+00	14

TABLE 17 (continued)

KI=1081.6:	FE=180	8.34E-01	1.22E-01	3.47E-02	4.16E+00	14	..
KI=1084.3:	FE=181	9.72E-01	1.36E-01	4.16E-02	4.28E+00	14	..
KI=1087.2:	FE=182	5.97E-01	9.72E-02	2.91E-02	4.68E+00	14	..
KI=1089.4:	FE=183	4.61E-01	8.05E-02	2.59E-02	5.62E+00	14	..
KI=1090.8:	FE=184	5.09E-01	8.60E-02	2.58E-02	5.08E+00	14	..
KI=1093.8:	FE=185	2.52E-01	1.09E-01	2.78E-02	1.10E+01	14	*
KI=1096.0:	FE=186	9.24E-01	1.38E-01	4.63E-02	5.03E+00	14	..
61100-n-C11-ANE:FE=187		1.55E+01	2.03E+00	6.40E-01	4.12E+00	14	
KI=1101.7:	FE=188	1.94E-01	6.80E-02	1.93E-02	9.84E+00	10	*
KI=1104.4:	FE=189	4.87E-01	1.62E-01	4.04E-02	8.31E+00	14	..
KI=1106.6:	FE=190	1.08E-01	5.42E-02	1.90E-02	1.77E+01	7	*
KI=1108.4:	FE=191	9.79E-01	4.02E-01	1.44E-01	1.47E+01	14	..
KI=1110.3:	FE=192	2.80E-01	1.49E-01	4.92E-02	1.76E+01	12	*
KI=1112.6:	FE=193	1.89E+00	6.64E-01	2.05E-01	1.08E+01	14	..
KI=1115.8:	FE=194	1.67E+00	3.92E-01	1.19E-01	7.12E+00	14	..
KI=1117.7:	FE=195	7.76E-01	1.77E-01	5.15E-02	6.64E+00	14	..
KI=1119.7:	FE=196	1.29E-01	1.40E-01	3.73E-02	2.89E+01	14	*
KI=1123.4:	FE=198	3.21E-01	2.44E-01	7.04E-02	2.19E+01	14	*
KI=1127.0:	FE=199	1.12E+00	2.30E-01	8.44E-02	7.53E+00	14	..
KI=1129.4:	FE=200	1.73E+00	5.83E-01	2.40E-01	1.39E+01	14	..
KI=1132.7:	FE=201	3.22E-01	5.58E-01	2.28E-01	7.07E+01	13	*
KI=1133.7:	FE=202	1.88E-01	3.94E-02	1.99E-02	1.04E+01	3	*
KI=1135.0:	FE=203	3.74E-01	4.43E-01	1.94E-01	5.20E+01	14	*
KI=1137.1:	FE=204	2.63E-01	2.85E-01	1.24E-01	4.71E+01	14	*
KI=1139.7:	FE=205	1.08E+00	3.90E-01	1.45E-01	1.34E+01	14	..
KI=1141.0:	FE=206	8.83E-01	2.63E-01	1.01E-01	1.14E+01	14	..
KI=1144.0:	FE=207	1.55E+00	3.75E-01	1.24E-01	8.12E+00	14	..
KI=1148.3:	FE=208	7.70E-01	1.83E-01	5.23E-02	6.79E+00	14	..
KI=1149.8:	FE=209	3.42E-01	9.72E-02	2.95E-02	8.63E+00	14	*
KI=1152.6:	FE=210	1.30E+00	2.59E-01	7.19E-02	5.53E+00	14	..
KI=1155.0:	FE=211	7.18E-01	1.37E-01	4.49E-02	6.25E+00	13	..

TABLE 17 (continued)

KI=1154.11	FE=212	1.58E+00	9.27E-01	2.28E-01	1.44E+01	14	..
KI=1158.01	FE=213	2.05E-01	5.82E-02	1.78E-02	8.67E+00	14	.
KI=1159.81	FE=214	1.47E+00	2.69E-01	7.34E-02	4.99E+00	14	..
KI=1161.81	FE=215	3.83E-01	1.13E-01	3.28E-02	8.57E+00	14	.
KI=1164.21	FE=216	2.74E+00	5.74E-01	1.44E-01	3.33E+00	14	
KI=1170.41	FE=217	2.44E+00	1.40E+00	3.28E-01	1.23E+01	14	
KI=1171.41	FE=218	1.35E+00	2.00E-01	5.53E-02	4.10E+00	13	..
KI=1175.91	FE=219	4.23E-01	5.12E-01	1.58E-01	3.74E+01	14	..
KI=1179.71	FE=220	6.64E-01	2.63E-01	8.80E-02	1.32E+01	14	..
KI=1181.41	FE=221	8.57E-01	2.15E-01	6.78E-02	7.91E+00	14	..
KI=1185.31	FE=222	1.98E+00	4.62E-01	1.34E-01	6.84E+00	14	..
KI=1189.61	FE=223	9.93E-01	2.08E-01	6.17E-02	6.21E+00	14	..
KI=1191.51	FE=224	8.22E-01	1.29E-01	3.93E-02	4.78E+00	14	..
KI=1193.91	FE=225	1.04E+00	4.39E-01	1.41E-01	1.34E+01	14	..
KI=1195.41	FE=226	3.44E-01	1.52E-01	7.65E-02	2.21E+01	3	.
81200-n-C12-ANE	FE=227	1.27E+01	1.53E+00	4.99E-01	3.92E+00	14	
KI=1203.41	FE=228	4.52E-01	2.31E-01	5.79E-02	1.28E+01	14	..
KI=1205.61	FE=229	3.34E-01	4.03E-01	1.05E-01	2.14E+01	14	.
KI=1207.21	FE=230	1.24E-01	7.52E-02	5.32E-02	4.30E+01	2	.
KI=1210.91	FE=231	6.98E-01	3.68E-01	1.15E-01	1.63E+01	14	..
KI=1214.21	FE=232	3.93E+00	6.12E-01	1.99E-01	5.07E+00	14	
KI=1218.21	FE=233	3.64E-01	5.33E-01	1.65E-01	4.51E+01	14	.
KI=1220.01	FE=234	2.75E-01	7.31E-02	3.25E-02	1.18E+01	5	.
KI=1221.71	FE=235	3.69E-01	3.09E-01	1.21E-01	2.27E+01	14	.
KI=1224.31	FE=236	3.10E-01	8.24E-02	2.54E-02	8.24E+00	14	.
KI=1227.81	FE=237	9.62E-01	1.20E-01	3.94E-02	4.11E+00	14	..
KI=1233.91	FE=238	1.94E+00	8.03E-01	1.89E-01	9.74E+00	14	..
KI=1238.61	FE=239	1.20E+00	3.48E-01	8.55E-02	7.15E+00	14	..
KI=1241.71	FE=240	5.73E-01	1.65E-01	3.94E-02	6.92E+00	14	..
KI=1243.41	FE=241	4.38E-01	1.01E-01	2.94E-02	6.74E+00	14	..
KI=1248.51	FE=242	7.94E-01	2.59E-01	6.35E-02	8.00E+00	14	..



TABLE 17 (continued)

KI=1252.81	FE=243	1.12E+00	1.42E-01	4.20E-02	3.74E+00	14	..
KI=1254.81	FE=244	1.69E+00	2.40E-01	6.88E-02	4.08E+00	14	..
KI=1259.31	FE=245	1.29E+00	3.10E-01	7.63E-02	5.91E+00	14	..
KI=1264.01	FE=246	1.70E+00	2.67E-01	8.44E-02	4.97E+00	13	..
KI=1267.61	FE=247	6.00E-01	1.44E-01	3.58E-02	5.97E+00	14	..
KI=1270.21	FE=248	1.14E+00	1.36E-01	4.28E-02	3.75E+00	14	..
KI=1273.11	FE=249	3.47E+00	4.53E-01	1.44E-01	4.21E+00	14	..
KI=1276.11	FE=250	1.44E-01	4.29E-02	1.42E-02	9.87E+00	7	..
KI=1277.51	FE=251	1.75E-01	1.45E-01	5.16E-02	2.94E+01	8	..
KI=1282.71	FE=253	1.92E+00	4.69E-01	1.31E-01	6.84E+00	14	..
KI=1285.61	FE=254	3.43E-01	2.35E-01	4.41E-02	1.87E+01	14	..
KI=1288.31	FE=255	1.74E-01	1.83E-01	9.69E-02	5.90E+01	3	..
KI=1294.21	FE=256	4.12E-01	2.71E-01	6.77E-02	1.64E+01	14	..
81300-n-C13-ANE	FE=257	1.09E+01	1.31E+00	4.39E-01	4.05E+00	14	..
KI=1304.41	FE=258	2.35E-01	2.57E-01	1.25E-01	5.31E+01	4	..
KI=1309.61	FE=259	6.22E-01	1.65E-01	6.00E-02	9.65E+00	14	..
KI=1311.51	FE=260	5.34E-01	3.54E-01	1.44E-01	2.71E+01	14	..
KI=1318.01	FE=262	1.31E+00	1.13E+00	3.48E-01	2.65E+01	14	..
KI=1323.11	FE=263	4.17E-01	2.84E-01	8.96E-02	2.15E+01	14	..
KI=1328.01	FE=264	4.45E-01	5.43E-01	2.56E-01	5.74E+01	9	..
KI=1333.41	FE=265	3.85E-01	2.93E-01	7.81E-02	2.03E+01	14	..
KI=1338.41	FE=266	7.08E-01	5.59E-01	2.44E-01	3.45E+01	14	..
KI=1342.21	FE=267	2.30E-01	1.57E-01	5.21E-02	2.26E+01	14	..
KI=1344.51	FE=268	1.11E-01	4.80E-02	1.91E-02	1.73E+01	5	..
KI=1347.51	FE=269	1.54E-01	1.09E-01	3.53E-02	2.28E+01	14	..
KI=1351.11	FE=270	7.28E-01	2.00E-01	6.68E-02	9.17E+00	14	..
KI=1354.01	FE=271	3.80E-01	6.41E-02	1.74E-02	4.59E+00	14	..
KI=1358.91	FE=272	6.87E-01	7.07E-02	2.30E-02	3.35E+00	14	..
KI=1364.01	FE=273	1.20E+00	3.45E-01	1.20E-01	9.94E+00	14	..
KI=1370.31	FE=274	6.56E-01	8.97E-02	2.72E-02	4.14E+00	14	..
KI=1376.71	FE=275	1.79E+00	2.89E-01	8.17E-02	4.55E+00	14	..

TABLE 17 (Concluded)

KI=1353.0:	FE=276	3.57E-01	9.24E-02	2.77E-02	7.74E+00	14 *
KI=1338.6:	FE=277	2.80E-01	3.77E-02	1.20E-02	4.62E+00	14 *
KI=1393.4:	FE=278	1.17E+00	1.94E-01	5.40E-02	4.64E+00	14 **
81400-n-C14-ANE:FE=279		5.23E+00	6.58E-01	1.87E-01	3.57E+00	14
KI=1404.0:	FE=280	2.54E-01	3.79E-02	1.17E-02	4.61E+00	14 *
KI=1407.9:	FE=281	7.80E-01	1.13E-01	3.85E-02	4.94E+00	14 **
KI=1411.1:	FE=282	6.83E-01	1.68E-01	4.73E-02	6.72E+00	14 **
KI=1413.6:	FE=283	1.23E-01	1.28E-01	3.47E-02	2.83E+01	14 *
KI=1422.0:	FE=285	8.77E-02	1.22E-02	5.19E-03	5.92E+00	4 **
KI=1427.2:	FE=286	3.18E-01	1.89E-01	7.93E-02	2.49E+01	14 *
KI=1430.3:	FE=287	1.28E-01	5.04E-02	1.40E-02	1.09E+01	14 *
KI=1434.1:	FE=288	1.02E-01	4.70E-02	1.19E-02	1.17E+01	14 *
KI=1443.2:	FE=289	2.65E-01	4.72E-02	1.40E-02	5.28E+00	14 *
KI=1446.1:	FE=290	1.29E-01	5.90E-02	1.97E-02	1.53E+01	14 *
KI=1450.5:	FE=291	2.39E-01	9.76E-02	5.11E-02	2.14E+01	4 *
KI=1453.4:	FE=292	1.91E-01	3.23E-02	2.78E-02	1.46E+01	14 *
KI=1456.7:	FE=293	2.70E-01	9.94E-02	3.57E-02	1.32E+01	14 *
KI=1462.7:	FE=294	1.22E+00	2.45E-01	7.34E-02	6.02E+00	14 **
KI=1470.7:	FE=295	2.74E-01	5.31E-02	1.74E-02	6.35E+00	14 *
81500-n-C15-ANE:FE=296		1.49E+00	1.83E-01	6.03E-02	4.03E+00	14 **
81600-n-C16-ANE:FE=297		2.37E-01	3.30E-02	1.08E-02	4.57E+00	14 *
8ANTH-610(15)(KI=1772)		1.00E+01	3.81E-06	9.16E-07	9.16E-06	14
82118-(IMPURITY 83)		8.15E-01	2.15E-01	7.08E-02	8.69E+00	11 **
TOTAL CONCENTRATION		6.07E+02	9.85E+01	2.51E+01	4.13E+00	14

\* - Feature average concentration is less than 0.4 mg/mL.

\*\* - Feature average concentration is less than 2.0 mg/mL and greater than 0.4 mg/mL.

TABLE 18. LISTING OF DFPCNT LAS INTERPRETATION METHOD USED FOR FEATURE IDENTIFICATION AND PERCENT RELATIVE QUANTITATION

LI.M.DFPCNT

SEP 13. 1983 10:22  
METHOD: DFPCNT  
CHANNEL 12

1. DATA INPUT

RUNTH 8PKS  
540.00, 500

HV/MIN DELAY MIN-AR BUNCH  
.300, 0.00, 500, NO

INTEGRATOR EVENTS  
TIME EVENT  
1 /E

CONTROL EVENTS  
TIME EVENT ECM RLY  
1 /E

2. DATA ANALYSIS

PROC RPRT SUP-UNK  
ISTD. ME. NO

UNITS TITLE  
% REL., AMT. REL. TO REF. FUEL

REF-RTW XRTW RF-UNK ID-LVL DVT  
.50, .5, 1.1000E+ 0, 500, 0.00

CALIBRATION PEAKS

	TIME	AMOUNT	FACTOR	NAME	
1	37.73	1.0000E+ 2	9.1264E+ 2	KI= 377.21	FE=001
2	38.80	1.0000E+ 2	2.6390E+ 2	KI= 388.01	FE=002
3	40.00	1.0000E+ 2	8.3065E+ 1	8400-n-C4-ANE1	FE=003
4	48.91	1.0000E+ 2	1.8857E+ 1	KI= 457.61	FE=004
5	50.00	1.0000E+ 2	1.2395E+ 1	8500-n-C5-ANE1	FE=005
6	50.71	1.0000E+ 2	8.2981E+ 2	KI= 507.01	FE=006
7	51.14	1.0000E+ 2	7.3200E+ 2	KI= 511.21	FE=007
8	51.44	1.0000E+ 2	7.9480E+ 2	KI= 514.31	FE=008
9	52.01	1.0000E+ 2	1.4348E+ 2	KI= 520.11	FE=009
10	52.60	1.0000E+ 2	0.0000E+ 0	CH2CL2 SOLVENT	
11	54.92	1.0000E+ 2	7.7428E+ 1	KI= 549.71	FE=010
12	55.10	1.0000E+ 2	6.4206E+ 1	KI= 552.41	FE=011
13	55.82	1.0000E+ 2	6.7215E+ 2	IMPURITY #1(KI= 558.6)	
14	55.95	1.0000E+ 2	1.0773E+ 1	KI= 560.41	FE=012
15	57.74	1.0000E+ 2	1.5522E+ 1	KI= 577.31	FE=013
16	60.00	1.0000E+ 2	6.3361E+ 0	8600-n-C6-ANE1	FE=014
17	60.92	1.0000E+ 2	1.0344E+ 3	KI= 609.21	FE=015
18	61.12	1.0000E+ 2	9.2776E+ 2	KI= 611.21	FE=016
19	61.39	1.0000E+ 2	5.9296E+ 2	KI= 613.91	FE=017
20	62.48	1.0000E+ 2	1.1918E+ 1	KI= 624.81	FE=018
21	62.73	1.0000E+ 2	9.3484E+ 2	KI= 627.31	FE=019
22	63.25	1.0000E+ 2	6.1448E+ 1	KI= 632.41	FE=020
23	63.30	1.0000E+ 2	1.0726E+ 2	KI= 653.01	FE=021
24	65.61	1.0000E+ 2	1.2587E+ 1	KI= 656.11	FE=022
25	65.89	1.0000E+ 2	2.7466E+ 1	KI= 658.81	FE=023

TABLE 18 (continued)

26	66.54.	1.0000E+	2.	2.1574E+	1.	KI= 669.01	FE=024
27	67.04.	1.0000E+	2.	8.7915E+	0.	KI= 670.41	FE=025
28	67.44.	1.0000E+	2.	1.3334E+	2.	IMPURITY #2(KI= 674.4)	
29	67.74.	1.0000E+	2.	7.2944E+	0.	KI= 677.41	FE=026
30	67.98.	1.0000E+	2.	4.0925E+	1.	KI= 679.81	FE=027
31	68.20.	1.0000E+	2.	4.2686E+	1.	KI= 682.01	FE=028
32	68.46.	1.0000E+	2.	2.3559E+	1.	KI= 684.61	FE=029
33	68.51.	1.0000E+	2.	7.5677E+	1.	KI= 685.81	FE=030
34	70.00.	1.0000E+	2.	4.0002E+	3.	\$700-n-C7-ANE1	FE=031
35	70.18.	1.0000E+	2.	7.1717E+	2.	KI= 701.81	FE=032
36	70.50.	1.0000E+	2.	9.6306E+	2.	KI= 705.01	FE=033
37	70.67.	1.0000E+	2.	1.1291E+	3.	KI= 706.71	FE=034
38	70.80.	1.0000E+	2.	6.0967E+	2.	KI= 708.01	FE=035
39	71.25.	1.0000E+	2.	6.3234E+	0.	KI= 712.51	FE=036
40	71.57.	1.0000E+	2.	6.9868E+	2.	KI= 715.11	FE=037
41	71.91.	1.0000E+	2.	9.6525E+	1.	KI= 719.11	FE=038
42	72.58.	1.0000E+	2.	6.2223E+	1.	KI= 725.81	FE=039
43	73.00.	1.0000E+	2.	4.1970E+	1.	KI= 730.01	FE=040
44	73.10.	1.0000E+	2.	2.4788E+	1.	KI= 731.01	FE=041
45	73.36.	1.0000E+	2.	6.2412E+	1.	KI= 733.61	FE=042
46	73.50.	1.0000E+	2.	6.9134E+	1.	KI= 735.01	FE=043
47	74.13.	1.0000E+	2.	6.4750E+	1.	KI= 741.21	FE=044
48	74.33.	1.0000E+	2.	2.0316E+	2.	KI= 743.31	FE=045
49	74.54.	1.0000E+	2.	2.2993E+	2.	KI= 745.41	FE=046
50	74.99.	1.0000E+	2.	7.5854E+	2.	KI= 749.91	FE=047
51	75.39.	1.0000E+	2.	1.6864E+	2.	KI= 753.91	FE=048
52	75.71.	1.0000E+	2.	2.3489E+	1.	KI= 757.11	FE=049
53	75.88.	1.0000E+	2.	1.1819E+	1.	KI= 758.81	FE=050
54	76.20.	1.0000E+	2.	3.3818E+	2.	KI= 762.01	FE=051
55	76.53.	1.0000E+	2.	5.6245E+	0.	KI= 765.31	FE=052
56	76.64.	1.0000E+	2.	1.4371E+	1.	KI= 766.41	FE=053
57	76.88.	1.0000E+	2.	2.1603E+	1.	KI= 768.81	FE=054
58	77.06.	1.0000E+	2.	4.0043E+	1.	KI= 770.61	FE=055
59	77.24.	1.0000E+	2.	4.9507E+	0.	KI= 772.41	FE=056
60	77.52.	1.0000E+	2.	1.2013E+	2.	KI= 775.21	FE=057
61	78.10.	1.0000E+	2.	8.8887E+	1.	KI= 781.01	FE=058
62	78.31.	1.0000E+	2.	1.4618E+	2.	KI= 783.21	FE=059
63	78.44.	1.0000E+	2.	7.9012E+	1.	KI= 784.41	FE=060
64	78.55.	1.0000E+	2.	7.0770E+	2.	KI= 785.41	FE=061
65	78.69.	1.0000E+	2.	3.9450E+	1.	KI= 786.91	FE=062
66	79.11.	1.0000E+	2.	1.0763E+	3.	KI= 791.11	FE=063
67	79.44.	1.0000E+	2.	1.6206E+	2.	KI= 794.41	FE=064
68	79.57.	1.0000E+	2.	6.8770E+	1.	KI= 795.71	FE=065
69	80.00.	1.0000E+	2.	3.7224E+	0.	\$800-n-C8-ANE1	FE=066
70	80.26.	1.0000E+	2.	1.0321E+	3.	KI= 802.51	FE=067
71	80.57.	1.0000E+	2.	7.7724E+	2.	KI= 805.71	FE=068
72	80.71.	1.0000E+	2.	4.1629E+	2.	KI= 807.11	FE=069
73	80.89.	1.0000E+	2.	1.0660E+	3.	KI= 808.91	FE=070
74	81.23.	1.0000E+	2.	1.7736E+	2.	KI= 812.31	FE=071
75	81.36.	1.0000E+	2.	3.6331E+	2.	KI= 813.61	FE=072
76	81.70.	1.0000E+	2.	1.1071E+	2.	KI= 817.01	FE=073
77	81.82.	1.0000E+	2.	1.2425E+	2.	KI= 818.21	FE=074
78	82.13.	1.0000E+	2.	4.5289E+	1.	KI= 821.31	FE=075
79	82.42.	1.0000E+	2.	2.7313E+	1.	KI= 824.21	FE=076
80	82.58.	1.0000E+	2.	1.0243E+	2.	KI= 825.71	FE=077
81	82.81.	1.0000E+	2.	1.7913E+	1.	KI= 828.11	FE=078
82	83.44.	1.0000E+	2.	1.5937E+	1.	KI= 834.41	FE=079
83	83.70.	1.0000E+	2.	4.1392E+	2.	KI= 837.01	FE=080
84	84.08.	1.0000E+	2.	4.6524E+	2.	KI= 840.81	FE=081
85	84.27.	1.0000E+	2.	4.8487E+	1.	KI= 842.71	FE=082
86	84.43.	1.0000E+	2.	1.6853E+	2.	KI= 844.21	FE=083

TABLE 18 (continued)

87	84.62	1.0000E+	2.	3.9263E+	2.	KI= 846.21	FE=084
88	84.82	1.0000E+	2.	7.6409E+	2.	KI= 848.21	FE=085
89	85.09	1.0000E+	2.	1.0375E+	3.	KI= 850.91	FE=086
90	85.28	1.0000E+	2.	5.7502E+	2.	KI= 852.81	FE=087
91	85.44	1.0000E+	2.	2.1786E+	1.	KI= 854.41	FE=088
92	85.61	1.0000E+	2.	5.6993E+	1.	KI= 856.11	FE=089
93	86.00	1.0000E+	2.	9.0440E+	1.	KI= 860.01	FE=090
94	86.22	1.0000E+	2.	1.2127E+	1.	KI= 862.21	FE=091
95	86.38	1.0000E+	2.	1.8207E+	1.	KI= 863.81	FE=092
96	86.50	1.0000E+	2.	1.5630E+	1.	KI= 865.01	FE=093
97	86.75	1.0000E+	2.	2.7876E+	2.	KI= 867.41	FE=094
98	86.95	1.0000E+	2.	6.8640E+	1.	KI= 869.51	FE=095
99	87.12	1.0000E+	2.	1.3868E+	1.	KI= 871.21	FE=096
100	87.31	1.0000E+	2.	2.7019E+	2.	KI= 873.11	FE=097
101	87.71	1.0000E+	2.	2.4232E+	2.	KI= 877.11	FE=098
102	88.00	1.0000E+	2.	3.4758E+	1.	KI= 880.01	FE=099
103	88.16	1.0000E+	2.	8.9005E+	1.	KI= 881.61	FE=100
104	88.45	1.0000E+	2.	2.7700E+	1.	KI= 884.51	FE=102
105	88.73	1.0000E+	2.	3.2816E+	2.	KI= 887.41	FE=103
106	89.09	1.0000E+	2.	3.6972E+	2.	KI= 890.91	FE=104
107	89.26	1.0000E+	2.	6.4350E+	2.	KI= 892.61	FE=105
108	89.45	1.0000E+	2.	2.3462E+	2.	KI= 894.61	FE=106
109	89.59	1.0000E+	2.	2.3902E+	2.	KI= 895.91	FE=107
110	89.76	1.0000E+	2.	1.2106E+	2.	KI= 897.61	FE=108
111	90.00	1.0000E+	2.	6.1924E+	0.	8900-n-C9-ANE1	FE=109
112	90.13	1.0000E+	2.	6.4250E+	2.	KI= 901.31	FE=110
113	90.84	1.0000E+	2.	8.5927E+	1.	KI= 908.41	FE=112
114	91.08	1.0000E+	2.	1.4107E+	2.	KI= 910.81	FE=113
115	91.39	1.0000E+	2.	2.5162E+	2.	KI= 913.91	FE=114
116	91.54	1.0000E+	2.	3.3653E+	2.	KI= 915.41	FE=115
117	91.76	1.0000E+	2.	6.1290E+	1.	KI= 917.71	FE=116
118	92.01	1.0000E+	2.	2.1310E+	2.	KI= 920.11	FE=117
119	92.26	1.0000E+	2.	4.6238E+	1.	KI= 922.61	FE=118
120	92.47	1.0000E+	2.	8.3519E+	1.	KI= 924.71	FE=119
121	92.91	1.0000E+	2.	5.6810E+	1.	KI= 929.11	FE=120
122	93.35	1.0000E+	2.	2.6992E+	1.	KI= 933.51	FE=122
123	93.92	1.0000E+	2.	4.0073E+	1.	KI= 939.41	FE=123
124	94.13	1.0000E+	2.	3.0900E+	2.	KI= 941.01	FE=124
125	94.53	1.0000E+	2.	7.4957E+	1.	KI= 945.31	FE=125
126	94.74	1.0000E+	2.	8.0238E+	1.	KI= 947.41	FE=126
127	95.21	1.0000E+	2.	1.2026E+	2.	KI= 952.01	FE=127
128	95.35	1.0000E+	2.	6.7317E+	1.	KI= 953.51	FE=128
129	95.58	1.0000E+	2.	2.4089E+	1.	KI= 955.81	FE=129
130	95.68	1.0000E+	2.	6.8552E+	1.	KI= 956.81	FE=130
131	96.05	1.0000E+	2.	1.0968E+	2.	KI= 960.51	FE=131
132	96.21	1.0000E+	2.	2.1615E+	1.	KI= 962.11	FE=132
133	96.47	1.0000E+	2.	3.9695E+	1.	KI= 964.71	FE=133
134	96.61	1.0000E+	2.	2.9600E+	2.	KI= 966.11	FE=134
135	96.74	1.0000E+	2.	7.8220E+	1.	KI= 967.41	FE=135
136	97.08	1.0000E+	2.	4.2876E+	1.	KI= 970.81	FE=136
137	97.27	1.0000E+	2.	6.3961E+	1.	KI= 972.71	FE=137
138	97.49	1.0000E+	2.	7.8946E+	2.	KI= 974.91	FE=138
139	97.69	1.0000E+	2.	6.7502E+	1.	KI= 976.91	FE=139
140	97.92	1.0000E+	2.	8.0933E+	1.	KI= 979.21	FE=140
141	98.01	1.0000E+	2.	2.7900E+	2.	KI= 980.21	FE=141
142	98.17	1.0000E+	2.	1.8619E+	2.	KI= 981.71	FE=142
143	98.33	1.0000E+	2.	4.4558E+	2.	KI= 983.31	FE=143
144	98.62	1.0000E+	2.	1.4030E+	1.	KI= 986.21	FE=144
145	98.90	1.0000E+	2.	1.2034E+	2.	KI= 989.01	FE=145
146	99.35	1.0000E+	2.	1.1814E+	2.	KI= 993.51	FE=146
147	99.52	1.0000E+	2.	4.1609E+	2.	KI= 995.31	FE=147

TABLE 18 (continued)

148	99.68.	1.0000E+	2.	4.3451E+	2.	KI= 996.81	FE=148
149	100.00.	1.0000E+	2.	7.7145E+	0.	\$1000-n-C10-ANE	FE=149
150	100.39.	1.0000E+	2.	1.4623E+	2.	KI=1003.91	FE=150
151	100.90.	1.0000E+	2.	5.5560E+	2.	KI=1009.01	FE=151
152	101.39.	1.0000E+	2.	2.8078E+	1.	KI=1013.91	FE=152
153	101.70.	1.0000E+	2.	7.6247E+	1.	KI=1017.01	FE=153
154	101.93.	1.0000E+	2.	2.0143E+	2.	KI=1019.31	FE=154
155	102.01.	1.0000E+	2.	1.0671E+	2.	KI=1020.11	FE=155
156	102.29.	1.0000E+	2.	3.4334E+	1.	KI=1022.91	FE=156
157	102.58.	1.0000E+	2.	4.7560E+	1.	KI=1025.81	FE=157
158	102.84.	1.0000E+	2.	7.4978E+	1.	KI=1028.41	FE=158
159	103.16.	1.0000E+	2.	1.2642E+	2.	KI=1031.61	FE=159
160	103.34.	1.0000E+	2.	3.0541E+	2.	KI=1033.41	FE=160
161	103.46.	1.0000E+	2.	1.5080E+	2.	KI=1034.61	FE=161
162	103.66.	1.0000E+	2.	3.4130E+	2.	KI=1036.61	FE=162
163	103.85.	1.0000E+	2.	1.3656E+	2.	KI=1038.51	FE=163
164	104.06.	1.0000E+	2.	5.9600E+	2.	KI=1040.61	FE=164
165	104.32.	1.0000E+	2.	7.7967E+	1.	KI=1043.21	FE=165
166	104.47.	1.0000E+	2.	2.1236E+	2.	KI=1044.71	FE=166
167	104.64.	1.0000E+	2.	4.9147E+	1.	KI=1046.41	FE=167
168	104.94.	1.0000E+	2.	1.3455E+	2.	KI=1049.41	FE=168
169	105.06.	1.0000E+	2.	8.4043E+	1.	KI=1050.61	FE=169
170	105.38.	1.0000E+	2.	6.1346E+	1.	KI=1053.81	FE=170
171	105.57.	1.0000E+	2.	2.9830E+	2.	KI=1055.31	FE=171
172	105.79.	1.0000E+	2.	7.4796E+	1.	KI=1057.91	FE=172
173	106.08.	1.0000E+	2.	4.7217E+	1.	KI=1060.81	FE=173
174	106.45.	1.0000E+	2.	4.0451E+	1.	KI=1064.61	FE=174
175	106.62.	1.0000E+	2.	1.6466E+	2.	KI=1066.21	FE=175
176	107.06.	1.0000E+	2.	3.0999E+	1.	KI=1070.61	FE=176
177	107.27.	1.0000E+	2.	5.5187E+	1.	KI=1072.81	FE=177
178	107.90.	1.0000E+	2.	3.2333E+	1.	KI=1079.01	FE=178
179	108.16.	1.0000E+	2.	1.2062E+	2.	KI=1081.61	FE=179
180	108.43.	1.0000E+	2.	1.0367E+	2.	KI=1084.31	FE=180
181	108.71.	1.0000E+	2.	1.6848E+	2.	KI=1087.21	FE=181
182	108.94.	1.0000E+	2.	2.1954E+	2.	KI=1089.41	FE=182
183	109.08.	1.0000E+	2.	1.9689E+	2.	KI=1090.81	FE=183
184	109.38.	1.0000E+	2.	4.0399E+	2.	KI=1093.81	FE=184
185	109.60.	1.0000E+	2.	1.0894E+	2.	KI=1096.01	FE=185
186	110.00.	1.0000E+	2.	6.4771E+	0.	\$1100-n-C11-ANE	FE=186
187	110.17.	1.0000E+	2.	5.1960E+	2.	KI=1101.71	FE=187
188	110.45.	1.0000E+	2.	2.0801E+	2.	KI=1104.41	FE=188
189	110.66.	1.0000E+	2.	9.2930E+	2.	KI=1106.61	FE=189
190	110.84.	1.0000E+	2.	1.0700E+	2.	KI=1108.41	FE=190
191	111.03.	1.0000E+	2.	3.7967E+	2.	KI=1110.31	FE=191
192	111.26.	1.0000E+	2.	5.4315E+	1.	KI=1112.61	FE=192
193	111.58.	1.0000E+	2.	6.0793E+	1.	KI=1115.61	FE=193
194	111.77.	1.0000E+	2.	1.3037E+	2.	KI=1117.71	FE=194
195	111.97.	1.0000E+	2.	8.2510E+	2.	KI=1119.71	FE=195
196	112.35.	1.0000E+	2.	3.2457E+	2.	KI=1123.41	FE=196
197	112.70.	1.0000E+	2.	8.9977E+	1.	KI=1127.01	FE=197
198	112.94.	1.0000E+	2.	5.8449E+	1.	KI=1129.41	FE=198
199	113.27.	1.0000E+	2.	2.9675E+	2.	KI=1132.71	FE=199
200	113.36.	1.0000E+	2.	5.3110E+	2.	KI=1133.71	FE=200
201	113.50.	1.0000E+	2.	2.5800E+	2.	KI=1135.01	FE=201
202	113.71.	1.0000E+	2.	3.6730E+	2.	KI=1137.11	FE=202
203	113.97.	1.0000E+	2.	9.4303E+	1.	KI=1139.71	FE=203
204	114.10.	1.0000E+	2.	1.1281E+	2.	KI=1141.01	FE=204
205	114.40.	1.0000E+	2.	6.4799E+	1.	KI=1144.01	FE=205
206	114.83.	1.0000E+	2.	1.3054E+	2.	KI=1148.31	FE=206
207	114.98.	1.0000E+	2.	2.9721E+	2.	KI=1149.81	FE=207
208	115.26.	1.0000E+	2.	7.7080E+	1.	KI=1152.61	FE=208

TABLE 18 (continued)

209	115.50.	1.0000E+	2.	1.4122E+	2.	KI=1155.01	FE=211
210	115.61.	1.0000E+	2.	4.3912E+	1.	KI=1156.11	FE=212
211	115.80.	1.0000E+	2.	4.8730E+	2.	KI=1158.01	FE=213
212	115.99.	1.0000E+	2.	6.8131E+	1.	KI=1159.81	FE=214
213	116.18.	1.0000E+	2.	2.6266E+	2.	KI=1161.81	FE=215
214	116.42.	1.0000E+	2.	3.6728E+	1.	KI=1164.21	FE=216
215	117.03.	1.0000E+	2.	3.7955E+	1.	KI=1170.41	FE=217
216	117.14.	1.0000E+	2.	7.4109E+	1.	KI=1171.41	FE=218
217	117.59.	1.0000E+	2.	2.2960E+	2.	KI=1175.91	FE=219
218	117.96.	1.0000E+	2.	1.5228E+	2.	KI=1179.71	FE=220
219	118.14.	1.0000E+	2.	1.1744E+	2.	KI=1181.41	FE=221
220	118.53.	1.0000E+	2.	5.0658E+	1.	KI=1185.31	FE=222
221	118.96.	1.0000E+	2.	1.0163E+	2.	KI=1189.61	FE=223
222	119.15.	1.0000E+	2.	1.2239E+	2.	KI=1191.51	FE=224
223	119.39.	1.0000E+	2.	9.9846E+	1.	KI=1193.91	FE=225
224	119.53.	1.0000E+	2.	2.8880E+	2.	KI=1195.41	FE=226
225	120.00.	1.0000E+	2.	7.9180E+	0.	01200-n-C12-ANE	FE=227
226	120.34.	1.0000E+	2.	2.2302E+	2.	KI=1203.41	FE=228
227	120.56.	1.0000E+	2.	2.8798E+	2.	KI=1205.61	FE=229
228	120.72.	1.0000E+	2.	8.0830E+	2.	KI=1207.21	FE=230
229	121.09.	1.0000E+	2.	1.4480E+	2.	KI=1210.91	FE=231
230	121.41.	1.0000E+	2.	2.5539E+	1.	KI=1214.21	FE=232
231	121.82.	1.0000E+	2.	2.7630E+	2.	KI=1218.21	FE=233
232	122.00.	1.0000E+	2.	3.5450E+	2.	KI=1220.01	FE=234
233	122.17.	1.0000E+	2.	2.9471E+	2.	KI=1221.71	FE=235
234	122.43.	1.0000E+	2.	3.2164E+	2.	KI=1224.31	FE=236
235	122.78.	1.0000E+	2.	1.0445E+	2.	KI=1227.81	FE=237
236	123.39.	1.0000E+	2.	5.2554E+	1.	KI=1233.91	FE=238
237	123.86.	1.0000E+	2.	8.4688E+	1.	KI=1238.61	FE=239
238	124.17.	1.0000E+	2.	1.7617E+	2.	KI=1241.71	FE=240
239	124.54.	1.0000E+	2.	2.2874E+	2.	KI=1245.41	FE=241
240	124.85.	1.0000E+	2.	1.2665E+	2.	KI=1248.51	FE=242
241	125.28.	1.0000E+	2.	8.9209E+	1.	KI=1252.81	FE=243
242	125.48.	1.0000E+	2.	5.9149E+	1.	KI=1254.81	FE=244
243	125.93.	1.0000E+	2.	7.6802E+	1.	KI=1259.31	FE=245
244	126.40.	1.0000E+	2.	5.8796E+	1.	KI=1264.01	FE=246
245	126.75.	1.0000E+	2.	1.6589E+	2.	KI=1267.61	FE=247
246	127.02.	1.0000E+	2.	8.7851E+	1.	KI=1270.21	FE=248
247	127.31.	1.0000E+	2.	2.9020E+	1.	KI=1273.11	FE=249
248	127.61.	1.0000E+	2.	6.8830E+	2.	KI=1276.11	FE=250
249	127.76.	1.0000E+	2.	5.7199E+	2.	KI=1277.51	FE=251
250	128.26.	1.0000E+	2.	5.2554E+	1.	KI=1282.71	FE=252
251	128.56.	1.0000E+	2.	2.9930E+	2.	KI=1285.61	FE=253
252	128.83.	1.0000E+	2.	5.6850E+	2.	KI=1288.31	FE=254
253	129.42.	1.0000E+	2.	2.4912E+	2.	KI=1294.21	FE=255
254	130.00.	1.0000E+	2.	9.3042E+	0.	01300-n-C13-ANE	FE=256
255	130.42.	1.0000E+	2.	4.2560E+	2.	KI=1304.41	FE=257
256	130.96.	1.0000E+	2.	1.6530E+	2.	KI=1309.61	FE=258
257	131.15.	1.0000E+	2.	1.8940E+	2.	KI=1311.51	FE=259
258	131.80.	1.0000E+	2.	7.6130E+	1.	KI=1318.01	FE=260
259	132.31.	1.0000E+	2.	2.6297E+	2.	KI=1323.11	FE=261
260	132.80.	1.0000E+	2.	2.2438E+	2.	KI=1328.01	FE=262
261	133.34.	1.0000E+	2.	2.5196E+	2.	KI=1333.41	FE=263
262	133.85.	1.0000E+	2.	1.3730E+	2.	KI=1338.41	FE=264
263	134.22.	1.0000E+	2.	4.4332E+	2.	KI=1342.21	FE=265
264	134.45.	1.0000E+	2.	9.0325E+	2.	KI=1344.51	FE=266
265	134.75.	1.0000E+	2.	6.6773E+	2.	KI=1347.51	FE=267
266	135.11.	1.0000E+	2.	1.3808E+	2.	KI=1351.11	FE=268
267	135.41.	1.0000E+	2.	2.6443E+	2.	KI=1354.01	FE=269
268	135.89.	1.0000E+	2.	1.4518E+	2.	KI=1358.91	FE=270
269	136.40.	1.0000E+	2.	8.3505E+	1.	KI=1364.01	FE=271

TABLE 18 (Concluded)

270	137.03.	1.0000E+	2.	1.5279E+	2.	KI=1370.31	FE=274
271	137.47.	1.0000E+	2.	5.6221E+	1.	KI=1376.71	FE=275
272	138.30.	1.0000E+	2.	2.8534E+	2.	KI=1383.01	FE=276
273	138.84.	1.0000E+	2.	3.5995E+	2.	KI=1388.61	FE=277
274	139.34.	1.0000E+	2.	8.6229E+	1.	KI=1393.41	FE=278
275	140.00.	1.0000E+	2.	1.9222E+	1.	81400-n-C14-ANE	FE=279
276	140.40.	1.0000E+	2.	3.9782E+	2.	KI=1404.01	FE=280
277	140.79.	1.0000E+	2.	1.7899E+	2.	KI=1407.91	FE=281
278	141.10.	1.0000E+	2.	1.4716E+	2.	KI=1411.11	FE=282
279	141.34.	1.0000E+	2.	8.4945E+	2.	KI=1413.61	FE=283
280	142.20.	1.0000E+	2.	1.1396E+	3.	KI=1422.01	FE=285
281	142.72.	1.0000E+	2.	3.2093E+	2.	KI=1427.21	FE=286
282	143.03.	1.0000E+	2.	7.9182E+	2.	KI=1430.31	FE=287
283	143.42.	1.0000E+	2.	9.9070E+	2.	KI=1434.11	FE=288
284	144.32.	1.0000E+	2.	3.8334E+	2.	KI=1443.21	FE=289
285	144.61.	1.0000E+	2.	8.2060E+	2.	KI=1446.11	FE=290
286	145.05.	1.0000E+	2.	4.1979E+	2.	KI=1450.51	FE=291
287	145.35.	1.0000E+	2.	5.5325E+	2.	KI=1453.41	FE=292
288	145.87.	1.0000E+	2.	3.7813E+	2.	KI=1458.71	FE=293
289	146.27.	1.0000E+	2.	8.2548E+	1.	KI=1462.71	FE=294
290	147.07.	1.0000E+	2.	3.6662E+	2.	KI=1470.71	FE=295
291	150.00.	1.0000E+	2.	6.7751E+	1.	81500-n-C15-ANE	FE=296
292	160.00.	1.0000E+	2.	4.2563E+	2.	81600-n-C16-ANE	FE=297
293	174.80.	1.0000E+	1.	1.0000E+	0.	8ANTH-d10(18)(KI=1772)	
294	211.80.	1.0000E+	2.	1.1369E+	2.	82118-(IMPURITY 93)	
295	530.00.	1.0000E+	2.	1.0000E+	0.	85300-NO R.T. UPDATE	
296	/E						

## 3. USER PROGRAMS

POST-ANAL DIALG-PRO PARAM-FILE  
/N

## 4. REPORTS

RDVC WRPTS  
1 T6. 1  
2 /E

DONE



TABLE 19. REP6 FOR A DATA BASE CONTAINING 14 BIPXXX FILES CREATED BY DFPCHT  
DATA ANALYSES OF 14 REPLICATE REFERENCE JP-4 FUELS ANALYSES

STATISTICAL SUMMARY OF MH07 DATA BASE

CONSISTING OF 14 SAMPLES  
CONCENTRATION (% REL.)

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	STANDARD DEVIATION	NUMBER OF SAMPLES
KI= 377.21	FE=001	1.01E+02	3.42E+01	1.20E+01	1.18E+01	10
KI= 388.01	FE=002	9.94E+01	4.34E+01	1.43E+01	1.44E+01	14
8400-n-C4-ANEI	FE=003	9.93E+01	3.71E+01	1.16E+01	1.17E+01	14
KI= 457.61	FE=004	1.00E+02	2.54E+01	6.95E+00	6.95E+00	14
8500-n-C5-ANEI	FE=005	1.00E+02	2.30E+01	6.26E+00	6.26E+00	14
KI= 507.01	FE=006	9.89E+01	4.00E+01	1.23E+01	1.24E+01	10
KI= 511.21	FE=007	9.99E+01	5.96E+01	4.21E+01	4.21E+01	2
KI= 514.31	FE=008	1.06E+02	7.33E+01	2.41E+01	2.28E+01	9
KI= 520.11	FE=009	1.00E+02	3.56E+01	8.13E+00	8.02E+00	14
CH2CL2 SOLVENT		0.00E+00	0.00E+00	0.00E+00	1.70E+33	14
KI= 549.71	FE=010	1.00E+02	2.27E+01	5.61E+00	5.61E+00	14
KI= 552.41	FE=011	1.00E+02	2.17E+01	5.54E+00	5.52E+00	14
IMPURITY #1(KI= 558.6)		1.04E+02	7.09E+01	2.89E+01	2.77E+01	13
KI= 560.41	FE=012	1.00E+02	1.62E+01	4.60E+00	4.59E+00	14
KI= 577.31	FE=013	1.00E+02	1.76E+01	4.81E+00	4.79E+00	14
8600-n-C6-ANEI	FE=014	1.00E+02	1.77E+01	4.72E+00	4.70E+00	14
KI= 609.21	FE=015	9.59E+01	1.38E+01	7.18E+00	7.49E+00	3
KI= 611.21	FE=016	1.02E+02	3.58E+01	1.03E+01	1.02E+01	13
KI= 613.91	FE=017	1.02E+02	4.06E+01	1.05E+01	1.02E+01	13
KI= 624.81	FE=018	1.00E+02	1.69E+01	4.51E+00	4.49E+00	14
KI= 627.31	FE=019	1.01E+02	2.79E+01	8.94E+00	8.80E+00	12
KI= 632.41	FE=020	1.01E+02	1.84E+01	4.66E+00	4.64E+00	14
KI= 653.01	FE=021	1.01E+02	1.89E+01	4.95E+00	4.93E+00	14
KI= 656.11	FE=022	1.01E+02	1.65E+01	4.39E+00	4.36E+00	14
KI= 658.81	FE=023	1.00E+02	3.06E+01	7.85E+00	7.85E+00	14
KI= 669.01	FE=024	1.01E+02	1.73E+01	4.47E+00	4.44E+00	14
KI= 670.41	FE=025	1.01E+02	1.65E+01	4.41E+00	4.39E+00	14
IMPURITY #2(KI= 674.4)		1.00E+02	1.22E+01	3.15E+00	3.14E+00	14
KI= 677.41	FE=026	1.01E+02	1.64E+01	4.34E+00	4.31E+00	14
KI= 679.81	FE=027	1.01E+02	1.67E+01	4.31E+00	4.29E+00	14
KI= 682.01	FE=028	1.00E+02	1.59E+01	4.23E+00	4.21E+00	14
KI= 684.61	FE=029	1.01E+02	1.60E+01	4.24E+00	4.22E+00	14
KI= 685.81	FE=030	1.01E+02	1.61E+01	4.30E+00	4.28E+00	14
8700-n-C7-ANEI	FE=031	1.01E+02	1.60E+01	4.23E+00	4.21E+00	14
KI= 701.81	FE=032	1.03E+02	3.49E+01	1.15E+01	1.12E+01	8
KI= 705.01	FE=033	1.01E+02	2.49E+01	8.67E+00	8.61E+00	14
KI= 706.71	FE=034	1.00E+02	6.11E+00	2.63E+00	2.63E+00	4
KI= 708.01	FE=035	1.03E+02	5.09E+01	1.55E+01	1.50E+01	14
KI= 712.51	FE=036	1.01E+02	1.59E+01	4.19E+00	4.16E+00	14
KI= 715.61	FE=037	1.01E+02	1.64E+01	4.79E+00	4.76E+00	14
KI= 719.11	FE=038	1.01E+02	1.49E+01	4.24E+00	4.22E+00	14
KI= 725.81	FE=039	1.01E+02	1.40E+01	4.03E+00	4.01E+00	14
KI= 730.01	FE=040	1.01E+02	1.73E+01	4.47E+00	4.45E+00	14
KI= 731.01	FE=041	1.01E+02	1.49E+01	4.04E+00	4.02E+00	14
KI= 733.61	FE=042	1.01E+02	1.59E+01	4.18E+00	4.16E+00	14
KI= 735.01	FE=043	1.01E+02	1.56E+01	4.15E+00	4.12E+00	14
KI= 741.21	FE=044	1.01E+02	1.53E+01	4.20E+00	4.18E+00	14
KI= 743.31	FE=045	1.01E+02	1.88E+01	4.93E+00	4.89E+00	14
KI= 745.41	FE=046	1.02E+02	3.70E+01	1.06E+01	1.04E+01	14
KI= 749.91	FE=047	1.00E+02	1.60E+01	4.81E+00	4.79E+00	14
KI= 753.91	FE=048	1.01E+02	1.50E+01	4.78E+00	4.74E+00	14
KI= 757.11	FE=049	1.01E+02	1.52E+01	4.13E+00	4.10E+00	14
KI= 758.81	FE=050	1.01E+02	1.49E+01	4.17E+00	4.15E+00	14

TABLE 19 (continued)

KI= 762.01	FE=051	1.00E+02	1.63E+01	4.46E+00	4.44E+00	14
KI= 765.31	FE=052	1.01E+02	1.51E+01	4.12E+00	4.10E+00	14
KI= 766.41	FE=053	1.01E+02	1.50E+01	4.03E+00	4.01E+00	14
KI= 768.81	FE=054	1.01E+02	1.50E+01	4.10E+00	4.08E+00	14
KI= 770.61	FE=055	1.01E+02	1.51E+01	4.07E+00	4.04E+00	14
KI= 772.41	FE=056	1.01E+02	1.50E+01	4.09E+00	4.06E+00	14
KI= 775.21	FE=057	1.01E+02	1.49E+01	3.96E+00	3.94E+00	14
KI= 781.01	FE=058	1.01E+02	1.50E+01	4.10E+00	4.08E+00	14
KI= 783.21	FE=059	1.00E+02	1.45E+01	4.11E+00	4.09E+00	14
KI= 784.41	FE=060	1.01E+02	2.04E+01	5.54E+00	5.48E+00	14
KI= 785.41	FE=061	1.00E+02	3.00E+01	8.31E+00	8.29E+00	11
KI= 786.91	FE=062	1.00E+02	1.45E+01	4.16E+00	4.14E+00	14
KI= 791.11	FE=063	1.01E+02	3.51E+01	9.62E+00	9.54E+00	10
KI= 794.41	FE=064	1.00E+02	2.13E+01	6.39E+00	6.38E+00	14
KI= 795.71	FE=065	1.00E+02	2.20E+01	6.06E+00	6.04E+00	14
8800-n-CD-ANE1						
KI= 802.51	FE=066	1.01E+02	1.55E+01	4.22E+00	4.20E+00	14
KI= 805.71	FE=067	1.00E+02	3.84E+01	1.09E+01	1.09E+01	11
KI= 807.11	FE=068	1.01E+02	2.49E+01	7.18E+00	7.12E+00	13
KI= 807.11	FE=069	1.01E+02	3.02E+01	8.17E+00	8.07E+00	14
KI= 808.91	FE=070	1.00E+02	2.24E+01	7.88E+00	7.86E+00	8
KI= 812.31	FE=071	1.00E+02	1.37E+01	4.05E+00	4.04E+00	14
KI= 813.61	FE=072	1.01E+02	1.42E+01	4.38E+00	4.35E+00	14
KI= 817.01	FE=073	1.00E+02	1.56E+01	4.16E+00	4.16E+00	14
KI= 818.21	FE=074	9.95E+01	1.61E+01	4.62E+00	4.64E+00	14
KI= 821.31	FE=075	9.98E+01	1.85E+01	4.76E+00	4.77E+00	14
KI= 824.21	FE=076	9.86E+01	3.44E+01	1.16E+01	1.18E+01	14
KI= 825.71	FE=077	2.14E+02	1.70E+03	4.34E+02	4.02E+02	14
KI= 828.11	FE=078	1.00E+02	1.47E+01	4.25E+00	4.24E+00	13
KI= 834.41	FE=079	1.01E+02	1.40E+01	4.14E+00	4.11E+00	13
KI= 837.01	FE=080	1.01E+02	1.74E+01	5.84E+00	5.77E+00	13
KI= 840.81	FE=081	1.01E+02	2.16E+01	5.65E+00	5.62E+00	14
KI= 842.71	FE=082	1.01E+02	1.38E+01	4.06E+00	4.03E+00	14
KI= 844.21	FE=083	1.01E+02	1.43E+01	4.23E+00	4.20E+00	14
KI= 846.21	FE=084	1.01E+02	1.69E+01	4.27E+00	4.24E+00	14
KI= 848.21	FE=085	1.01E+02	2.43E+01	6.30E+00	6.24E+00	14
KI= 850.91	FE=086	1.00E+02	3.17E+01	1.22E+01	1.22E+01	6
KI= 852.81	FE=087	1.02E+02	2.55E+01	6.31E+00	6.21E+00	14
KI= 854.41	FE=088	1.01E+02	1.38E+01	4.14E+00	4.11E+00	14
KI= 856.11	FE=089	1.01E+02	1.52E+01	4.25E+00	4.22E+00	14
KI= 860.01	FE=090	1.01E+02	1.51E+01	4.29E+00	4.26E+00	14
KI= 862.21	FE=091	1.01E+02	1.56E+01	4.56E+00	4.53E+00	14
KI= 863.81	FE=092	1.01E+02	1.25E+01	3.83E+00	3.81E+00	14
KI= 865.01	FE=093	1.01E+02	1.30E+01	3.97E+00	3.95E+00	14
KI= 867.41	FE=094	1.00E+02	2.30E+01	6.96E+00	6.95E+00	14
KI= 869.51	FE=095	1.00E+02	1.37E+01	4.22E+00	4.20E+00	14
KI= 871.71	FE=096	1.01E+02	1.35E+01	4.06E+00	4.04E+00	14
KI= 873.11	FE=097	9.93E+01	3.39E+01	9.75E+00	9.82E+00	14
KI= 877.11	FE=098	1.00E+02	1.31E+01	4.58E+00	4.56E+00	14
KI= 880.01	FE=099	1.00E+02	1.35E+01	3.95E+00	3.94E+00	14
KI= 881.61	FE=100	9.99E+01	1.32E+01	4.36E+00	4.36E+00	14
KI= 884.51	FE=102	9.98E+01	1.40E+01	4.02E+00	4.03E+00	14
KI= 887.41	FE=103	9.93E+01	4.38E+01	1.12E+01	1.13E+01	14
KI= 890.91	FE=104	1.01E+02	2.08E+01	7.69E+00	7.60E+00	14
KI= 892.61	FE=105	1.02E+02	3.74E+01	1.01E+01	9.89E+00	14
KI= 894.61	FE=106	1.01E+02	2.08E+01	5.38E+00	5.33E+00	14
KI= 895.91	FE=107	1.01E+02	1.94E+01	5.39E+00	5.35E+00	14
KI= 897.61	FE=108	1.01E+02	1.26E+01	3.94E+00	3.91E+00	14
8900-n-C9-ANE1						
KI= 901.31	FE=109	1.01E+02	1.36E+01	4.33E+00	4.30E+00	14
KI= 908.41	FE=110	1.01E+02	1.57E+01	6.26E+00	6.20E+00	7
KI= 910.81	FE=112	1.01E+02	2.17E+01	6.51E+00	6.47E+00	14
	FE=113	1.03E+02	3.84E+01	1.50E+01	1.46E+01	14

TABLE 19 (continued)

KI= 913.91	FE=114	1.07E+02	6.69E+01	2.60E+01	<u>2.43E+01</u>	14
KI= 915.41	FE=115	1.07E+02	8.00E+01	2.31E+01	<u>2.16E+01</u>	14
KI= 917.71	FE=116	8.70E+01	1.09E+02	3.05E+01	<u>3.50E+01</u>	14
KI= 920.11	FE=117	1.03E+02	4.63E+01	1.46E+01	1.42E+01	14
KI= 922.61	FE=118	1.01E+02	1.72E+01	5.34E+00	5.29E+00	14
KI= 924.71	FE=119	1.01E+02	1.73E+01	5.38E+00	5.33E+00	14
KI= 929.11	FE=120	1.01E+02	2.09E+01	5.81E+00	5.74E+00	14
KI= 933.51	FE=122	1.02E+02	2.56E+01	8.79E+00	8.60E+00	14
KI= 939.41	FE=123	1.03E+02	3.57E+01	1.32E+01	1.28E+01	14
KI= 941.01	FE=124	1.00E+02	9.09E+01	4.90E+01	<u>4.90E+01</u>	3
KI= 945.31	FE=125	1.02E+02	1.89E+01	5.57E+00	5.48E+00	14
KI= 947.41	FE=126	1.01E+02	1.50E+01	4.68E+00	4.62E+00	14
KI= 952.01	FE=127	1.01E+02	1.55E+01	4.83E+00	4.80E+00	14
KI= 953.51	FE=128	1.01E+02	1.41E+01	4.64E+00	4.61E+00	14
KI= 955.81	FE=129	1.01E+02	3.92E+01	9.59E+00	9.50E+00	14
KI= 956.81	FE=130	1.00E+02	2.65E+01	8.56E+00	8.55E+00	13
KI= 960.51	FE=131	1.01E+02	3.18E+01	1.14E+01	1.12E+01	14
KI= 962.11	FE=132	1.01E+02	1.96E+01	6.66E+00	6.63E+00	14
KI= 964.71	FE=133	1.02E+02	4.00E+01	1.55E+01	1.52E+01	14
KI= 966.11	FE=134	9.72E+01	2.26E+01	8.05E+00	8.29E+00	6
KI= 967.41	FE=135	8.22E+01	9.80E+01	3.57E+01	<u>4.34E+01</u>	14
KI= 970.81	FE=136	1.00E+02	1.54E+01	4.78E+00	4.76E+00	14
KI= 972.71	FE=137	1.00E+02	1.61E+01	5.16E+00	5.16E+00	14
KI= 974.91	FE=138	1.04E+02	6.76E+01	2.46E+01	<u>2.38E+01</u>	13
KI= 976.91	FE=139	9.99E+01	1.73E+01	5.69E+00	5.69E+00	14
KI= 979.21	FE=140	9.99E+01	4.30E+01	1.25E+01	1.25E+01	14
KI= 980.21	FE=141	1.00E+02	1.29E+01	5.62E+00	5.62E+00	4
KI= 981.71	FE=142	9.94E+01	2.27E+01	7.70E+00	7.74E+00	14
KI= 983.31	FE=143	9.96E+01	3.68E+01	1.32E+01	1.32E+01	14
KI= 986.21	FE=144	1.00E+02	1.40E+01	4.16E+00	4.15E+00	14
KI= 989.01	FE=145	9.99E+01	2.44E+01	6.88E+00	6.89E+00	14
KI= 993.51	FE=146	1.03E+02	7.15E+01	1.93E+01	1.87E+01	14
KI= 995.31	FE=147	1.06E+02	7.99E+01	2.87E+01	<u>2.70E+01</u>	14
KI= 996.81	FE=148	1.06E+02	7.74E+01	1.91E+01	1.81E+01	12
91000-n-C10-ANE	FE=149	1.00E+02	1.61E+01	4.41E+00	4.39E+00	14
KI=1003.91	FE=150	1.00E+02	2.57E+01	6.39E+00	6.37E+00	14
KI=1009.01	FE=151	1.00E+02	2.06E+02	8.00E+01	<u>7.99E+01</u>	7
KI=1013.91	FE=152	1.01E+02	1.77E+01	5.40E+00	5.33E+00	14
KI=1017.01	FE=153	1.02E+02	2.12E+01	5.90E+00	5.81E+00	14
KI=1019.31	FE=154	9.98E+01	1.03E+01	5.22E+00	5.23E+00	3
KI=1020.11	FE=155	1.03E+02	5.34E+01	1.75E+01	1.71E+01	14
KI=1022.91	FE=156	1.01E+02	1.36E+01	4.45E+00	4.41E+00	14
KI=1025.81	FE=157	1.01E+02	1.51E+01	4.54E+00	4.50E+00	14
KI=1028.41	FE=158	1.03E+02	3.64E+01	9.49E+00	9.26E+00	14
KI=1031.61	FE=159	1.07E+02	6.44E+01	1.86E+01	1.74E+01	14
KI=1033.41	FE=160	1.05E+02	3.16E+01	1.29E+01	1.23E+01	12
KI=1034.61	FE=161	1.01E+02	9.31E+01	2.86E+01	<u>2.83E+01</u>	14
KI=1036.61	FE=162	1.02E+02	9.00E+01	2.91E+01	<u>2.87E+01</u>	14
KI=1038.51	FE=163	1.04E+02	4.07E+01	1.45E+01	1.38E+01	14
KI=1040.61	FE=164	1.02E+02	1.01E+02	4.42E+01	<u>4.33E+01</u>	13
KI=1043.21	FE=165	1.04E+02	3.41E+01	1.33E+01	1.28E+01	14
KI=1044.71	FE=166	1.05E+02	4.11E+01	1.72E+01	1.63E+01	14
KI=1046.41	FE=167	1.03E+02	3.17E+01	1.22E+01	1.18E+01	14
KI=1049.41	FE=168	1.06E+02	4.51E+01	1.84E+01	1.74E+01	14
KI=1050.61	FE=169	1.07E+02	5.09E+01	2.08E+01	1.95E+01	14
KI=1053.81	FE=170	1.08E+02	6.85E+01	2.61E+01	<u>2.42E+01</u>	14
KI=1055.31	FE=171	1.02E+02	4.00E+01	1.95E+01	1.90E+01	4
KI=1057.91	FE=173	1.05E+02	4.02E+01	1.64E+01	1.56E+01	14
KI=1060.81	FE=174	1.01E+02	1.91E+01	6.32E+00	6.24E+00	14
KI=1064.61	FE=175	1.01E+02	1.32E+01	4.08E+00	4.06E+00	14
KI=1066.21	FE=176	1.01E+02	1.57E+01	4.30E+00	4.26E+00	14

TABLE 19 (continued)

KI=1070.41	FE=177	1.01E+02	1.29E+01	3.89E+00	3.87E+00	14
KI=1072.81	FE=178	1.01E+02	1.36E+01	4.32E+00	4.30E+00	14
KI=1079.01	FE=179	1.01E+02	1.36E+01	4.01E+00	3.99E+00	14
KI=1081.61	FE=180	1.01E+02	1.47E+01	4.19E+00	4.16E+00	14
KI=1084.31	FE=181	1.01E+02	1.42E+01	4.31E+00	4.28E+00	14
KI=1087.21	FE=182	1.01E+02	1.64E+01	4.91E+00	4.88E+00	14
KI=1089.41	FE=183	1.01E+02	1.77E+01	5.69E+00	5.62E+00	14
KI=1090.81	FE=184	1.00E+02	1.69E+01	5.09E+00	5.08E+00	14
KI=1093.81	FE=185	1.02E+02	4.38E+01	1.12E+01	1.10E+01	14
KI=1096.01	FE=186	1.01E+02	1.73E+01	5.07E+00	5.03E+00	14
§1100-n-C11-ANE	FE=187	1.01E+02	1.31E+01	4.15E+00	4.12E+00	14
KI=1101.71	FE=188	1.02E+02	3.53E+01	1.00E+01	9.86E+00	10
KI=1104.41	FE=189	1.01E+02	3.38E+01	8.41E+00	8.31E+00	14
KI=1106.61	FE=190	9.99E+01	5.04E+01	1.77E+01	1.77E+01	7
KI=1108.41	FE=191	1.05E+02	4.30E+01	1.55E+01	1.47E+01	14
KI=1110.31	FE=192	1.06E+02	5.65E+01	1.87E+01	1.76E+01	12
KI=1112.61	FE=193	1.03E+02	3.62E+01	1.11E+01	1.08E+01	14
KI=1115.81	FE=194	1.01E+02	2.38E+01	7.21E+00	7.12E+00	14
KI=1117.71	FE=195	1.01E+02	2.31E+01	6.72E+00	6.64E+00	14
KI=1119.71	FE=196	1.06E+02	1.16E+02	3.07E+01	<del>2.89E+01</del>	14
KI=1123.41	FE=198	1.04E+02	7.92E+01	2.29E+01	<del>2.17E+01</del>	14
KI=1127.01	FE=199	1.01E+02	2.07E+01	7.59E+00	7.55E+00	14
KI=1129.41	FE=200	1.01E+02	3.41E+01	1.40E+01	1.39E+01	14
KI=1132.71	FE=201	9.57E+01	1.66E+02	6.77E+01	<del>7.07E+01</del>	13
KI=1133.71	FE=202	9.99E+01	2.09E+01	1.06E+01	1.06E+01	3
KI=1135.01	FE=203	9.65E+01	1.14E+02	5.02E+01	<del>5.20E+01</del>	14
KI=1137.11	FE=204	9.66E+01	1.05E+02	4.55E+01	<del>4.71E+01</del>	14
KI=1139.71	FE=205	1.02E+02	3.68E+01	1.37E+01	1.34E+01	14
KI=1141.01	FE=206	9.96E+01	2.97E+01	1.14E+01	1.14E+01	14
KI=1144.01	FE=207	1.00E+02	2.43E+01	8.15E+00	8.12E+00	14
KI=1148.31	FE=208	1.00E+02	2.39E+01	6.82E+00	6.79E+00	14
KI=1149.81	FE=209	1.02E+02	2.89E+01	8.76E+00	8.63E+00	14
KI=1152.61	FE=210	1.00E+02	2.00E+01	5.54E+00	5.53E+00	14
KI=1155.01	FE=211	1.01E+02	1.94E+01	6.34E+00	6.25E+00	13
KI=1156.11	FE=212	1.01E+02	5.93E+01	1.46E+01	1.44E+01	14
KI=1158.01	FE=213	1.00E+02	2.83E+01	8.67E+00	8.67E+00	14
KI=1159.81	FE=214	1.00E+02	1.83E+01	5.01E+00	4.99E+00	14
KI=1161.81	FE=215	1.01E+02	2.96E+01	8.61E+00	8.57E+00	14
KI=1164.21	FE=216	1.00E+02	2.11E+01	5.33E+00	5.33E+00	14
KI=1170.41	FE=217	1.01E+02	5.30E+01	1.24E+01	1.23E+01	14
KI=1171.41	FE=218	9.98E+01	1.48E+01	4.09E+00	4.10E+00	13
KI=1175.91	FE=219	9.71E+01	1.17E+02	3.63E+01	<del>3.74E+01</del>	14
KI=1179.71	FE=220	1.01E+02	4.03E+01	1.34E+01	1.32E+01	14
KI=1181.41	FE=221	1.01E+02	2.53E+01	7.96E+00	7.91E+00	14
KI=1185.31	FE=222	1.00E+02	2.34E+01	6.88E+00	6.86E+00	14
KI=1189.61	FE=223	1.01E+02	2.11E+01	6.27E+00	6.21E+00	14
KI=1191.51	FE=224	1.01E+02	1.58E+01	4.81E+00	4.78E+00	14
KI=1193.91	FE=225	1.04E+02	4.39E+01	1.41E+01	1.36E+01	14
KI=1195.41	FE=226	1.00E+02	4.40E+01	2.21E+01	<del>2.21E+01</del>	3
§1200-n-C12-ANE	FE=227	1.01E+02	1.21E+01	3.95E+00	3.92E+00	14
KI=1203.41	FE=228	1.01E+02	5.14E+01	1.29E+01	1.28E+01	14
KI=1205.61	FE=229	9.67E+01	1.16E+02	3.04E+01	<del>3.14E+01</del>	14
KI=1207.21	FE=230	1.00E+02	6.08E+01	4.30E+01	<del>4.30E+01</del>	2
KI=1210.91	FE=231	1.01E+02	5.33E+01	1.66E+01	1.65E+01	14
KI=1214.21	FE=232	1.00E+02	1.56E+01	5.08E+00	5.07E+00	14
KI=1218.21	FE=233	1.01E+02	1.54E+02	4.57E+01	<del>4.51E+01</del>	14
KI=1220.01	FE=234	9.75E+01	2.59E+01	1.15E+01	1.18E+01	5
KI=1221.71	FE=235	1.09E+02	9.09E+01	3.56E+01	<del>3.27E+01</del>	14
KI=1224.31	FE=236	9.99E+01	2.66E+01	8.23E+00	8.24E+00	14
KI=1227.81	FE=237	1.00E+02	1.26E+01	4.13E+00	4.11E+00	14
KI=1233.91	FE=238	1.02E+02	4.23E+01	9.96E+00	9.76E+00	14

TABLE 19 (Concluded)

KI=1238.61	FE=239	1.01E+02	2.95E+01	7.24E+00	7.15E+00	14
KI=1241.71	FE=240	1.01E+02	2.91E+01	6.98E+00	6.92E+00	14
KI=1245.41	FE=241	1.00E+02	2.31E+01	6.78E+00	6.76E+00	14
KI=1248.51	FE=242	1.01E+02	3.28E+01	8.04E+00	8.00E+00	14
KI=1252.81	FE=243	1.00E+02	1.27E+01	3.75E+00	3.74E+00	14
KI=1254.81	FE=244	9.99E+01	1.42E+01	4.07E+00	4.08E+00	14
KI=1259.31	FE=245	9.92E+01	2.38E+01	5.86E+00	5.91E+00	14
KI=1264.01	FE=246	9.99E+01	1.57E+01	4.96E+00	4.97E+00	14
KI=1267.61	FE=247	9.96E+01	2.38E+01	5.95E+00	5.97E+00	14
KI=1270.21	FE=248	1.00E+02	1.20E+01	3.76E+00	3.75E+00	14
KI=1273.11	FE=249	1.01E+02	1.32E+01	4.25E+00	4.21E+00	14
KI=1276.11	FE=250	9.91E+01	2.95E+01	9.79E+00	9.87E+00	7
KI=1277.51	FE=251	1.00E+02	8.31E+01	2.95E+01	2.94E+01	8
KI=1282.71	FE=253	1.01E+02	2.46E+01	6.89E+00	6.84E+00	14
KI=1285.61	FE=254	1.03E+02	7.05E+01	1.92E+01	1.87E+01	14
KI=1288.31	FE=255	1.00E+02	1.04E+02	5.51E+01	5.50E+01	3
KI=1294.21	FE=256	1.03E+02	6.75E+01	1.69E+01	1.64E+01	14
§1300-n-C13-ANE	FE=257	1.01E+02	1.22E+01	4.08E+00	4.05E+00	14
KI=1304.41	FE=258	1.00E+02	1.10E+02	5.31E+01	5.31E+01	4
KI=1309.61	FE=259	1.03E+02	2.73E+01	9.93E+00	9.65E+00	14
KI=1311.51	FE=260	1.01E+02	6.71E+01	2.74E+01	2.71E+01	14
KI=1318.01	FE=262	9.99E+01	8.64E+01	2.65E+01	2.65E+01	14
KI=1323.11	FE=263	1.10E+02	7.46E+01	2.36E+01	2.15E+01	14
KI=1328.01	FE=264	9.98E+01	1.22E+02	5.73E+01	5.74E+01	9
KI=1333.41	FE=265	9.70E+01	7.38E+01	1.97E+01	2.03E+01	14
KI=1338.41	FE=266	9.72E+01	7.68E+01	3.35E+01	3.45E+01	14
KI=1342.21	FE=267	1.02E+02	6.97E+01	2.31E+01	2.26E+01	14
KI=1344.51	FE=268	1.00E+02	4.33E+01	1.73E+01	1.73E+01	5
KI=1347.51	FE=269	1.03E+02	7.29E+01	2.35E+01	2.28E+01	14
KI=1351.11	FE=270	1.01E+02	2.76E+01	9.22E+00	9.17E+00	14
KI=1354.01	FE=271	1.00E+02	1.70E+01	4.61E+00	4.57E+00	14
KI=1358.91	FE=272	9.98E+01	1.03E+01	3.34E+00	3.35E+00	14
KI=1364.01	FE=273	1.00E+02	2.88E+01	9.99E+00	9.94E+00	14
KI=1370.31	FE=274	1.00E+02	1.37E+01	4.16E+00	4.14E+00	14
KI=1376.71	FE=275	1.01E+02	1.62E+01	4.59E+00	4.55E+00	14
KI=1383.01	FE=276	1.02E+02	2.64E+01	7.89E+00	7.74E+00	14
KI=1388.61	FE=277	1.01E+02	1.36E+01	4.67E+00	4.62E+00	14
KI=1393.41	FE=278	1.00E+02	1.68E+01	4.66E+00	4.64E+00	14
§1400-n-C14-ANE	FE=279	1.00E+02	1.26E+01	3.59E+00	3.57E+00	14
KI=1404.01	FE=280	1.01E+02	1.51E+01	4.66E+00	4.61E+00	14
KI=1407.91	FE=281	1.01E+02	1.45E+01	4.97E+00	4.94E+00	14
KI=1411.11	FE=282	1.00E+02	2.47E+01	6.96E+00	6.92E+00	14
KI=1413.61	FE=283	1.04E+02	1.09E+02	2.95E+01	2.83E+01	14
KI=1422.01	FE=285	9.99E+01	1.39E+01	5.91E+00	5.92E+00	4
KI=1427.21	FE=286	1.02E+02	6.06E+01	2.54E+01	2.49E+01	14
KI=1430.31	FE=287	1.02E+02	3.99E+01	1.11E+01	1.09E+01	14
KI=1434.11	FE=288	1.01E+02	4.66E+01	1.18E+01	1.17E+01	14
KI=1443.21	FE=289	1.02E+02	1.81E+01	5.34E+00	5.28E+00	14
KI=1446.11	FE=290	1.06E+02	4.84E+01	1.62E+01	1.53E+01	14
KI=1450.51	FE=291	1.00E+02	4.10E+01	2.15E+01	2.14E+01	4
KI=1453.41	FE=292	1.06E+02	4.55E+01	1.54E+01	1.44E+01	14
KI=1458.71	FE=293	1.02E+02	3.76E+01	1.35E+01	1.32E+01	14
KI=1463.71	FE=294	1.01E+02	2.02E+01	6.08E+00	6.02E+00	14
KI=1473.71	FE=295	1.00E+02	1.95E+01	6.38E+00	6.35E+00	14
§1500-n-C15-ANE	FE=296	1.01E+02	1.24E+01	4.09E+00	4.05E+00	14
§1600-n-C16-ANE	FE=297	1.01E+02	1.40E+01	4.62E+00	4.57E+00	14
SANTH-d10(15)(KI=1772)		1.00E+01	3.81E-06	1.30E-06	1.30E-05	14
§2118-(IMPURITY #3)		9.26E+01	2.45E+01	8.05E+00	8.69E+00	11
TOTAL CONCENTRATION		2.77E+04	4.11E+03	1.27E+03	4.58E+00	14

TABLE 20. EXAMPLE OF THE GC/MS QUANTITATION REPORT  
FOR THE REFERENCE JP-4 FUEL

Page 1

\*\*\* QUANTIFICATION REPORT \*\*\*

DIST. FUELS MASTER METHOD  
PREPARED 9/2/83 KMSIMON

DATA FILE: 17742  
STANDARDS FILE: 7888  
CALIBRATIONS FILE: 8881

I.D. NO.	COMPOUND NAME	CONC'N X REL.	
1	KI= 566.2, F=012( 43, 71)	184.446 //2	
2	KI= 577.5, F=013( 57, 41)	94.894 //2	
3	0688-n-C6-ANE, F=014( 57, 41)	89.344 //2	
4	KI= 626.9, F=018( 56, 41)	91.228 //2	
5	KI= 657.8, F=022( 84, 41)	95.935 //2	
6	KI= 661.1, F=023( 78, 77)	96.886 //3	
7	KI= 671.3, F=024( 56, 41)	97.389 //3	
8	KI= 673.1, F=025( 43, 85)	100.465 //1	
9	KI= 679.6, F=026( 43, 78)	96.299 //2	
10	KI= 681.8, F=027( 78, 41)	91.978 //2	
11	KI= 682.8, F=028( 78, 55)	96.368 //2	
12	KI= 685.2, F=029( 78, 56)	91.585 //2	
13	0788-n-C7-ANE, F=031( 43, 108)	100.228 //2	
14	KI= 710.9, F=036( 83, 98)	91.855 //2	
15	KI= 714.4, F=037( 55, 97)	108.400 //2	
16	KI= 724.4, F=039( 69, 41)	97.483 //2	
17	KI= 738.9, F=040+041( 57, 43)	98.249 //1	
18	KI= 732.6, F=042( 78, 55)	101.882 //2	
19	KI= 734.1, F=043( 43, 71)	89.326 //2	
20	KI= 739.8, F=044( 78, 55)	103.397 //2	
21	KI= 756.7, F=049( 78, 43)	93.657 //1	
22	KI= 757.2, F=050( 91, 92)	101.466 //1	
23	KI= 765.8, F=052+053( 57, 99)	96.214 //1	
24	KI= 766.7, F=054( 97, 112)	97.922 //1	
25	KI= 768.6, F=055( 97, 55)	111.174 //1	
26	KI= 772.1, F=056( 43, 57)	96.693 //1	
27	KI= 784.8, F=062( 97, 55)	96.689 //3	
28	KI= 792.8, ( 97, 55)	99.759	
29	0888-n-C8-ANE, F=066( 43, 85)	97.156 //1	
30	KI= 820.8, F=075( 83, 55)	96.836 //3	
31	KI= 824.7, F=076( 69, 111)	81.4.400 //3	
32	KI= 827.5, F=078( 43, 57)	97.794 //1	
33	KI= 833.4, F=079( 57, 11)	97.365 //1	
34	KI= 839.6, F=082( 69, 111)	101.539 //1	
35	KI= 851.3, F=088( 91, 106)	97.972 //1	
36	KI= 853.5, F=089( 43, 84)	99.383 //0	
37	KI= 859.5, F=091( 91, 106)	100.181 //1	
38	KI= 863.2, F=092+093 ( 43, 85)	111.154 //1	
39	DUPLICATE OF UNRESOLVED 092 + 093		440.537

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TABLE 20 (continued)

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## \*\*\* QUANTIFICATION REPORT \*\*\*

DIST. FUELS MASTER METHOD  
PREPARED 9/2/83 KMSINON

DATA FILE: 17742  
STANDARDS FILE: 7000  
CALIBRATIONS FILE: 0001

I.D. NO.	COMPOUND NAME	CONC'N & REL.
40	KI= 870.5, F=096( 57, 41)	93.449 109
41	KI= 877.1, F=099( 97, 55)	103.138 110
42	KI= 881.5, F=102( 91, 106)	100.624 112
43	0900-n-C9-ANE, F=107( 57, 41)	99.522 111
44	KI= 916.7, ( 43, 85)	94.881
45	KI= 919.7, ( 83, 82)	96.323
46	KI= 932.9, F=122( 57, 71)	103.210 118
47	KI= 938.3, F=123( 57, 98)	94.801 122
48	KI= 953.1, F=129+130(105, 120)	96.743 108
49	KI= 959.4, (105, 120)	96.431
50	KI= 961.5, F=132( 57, 43)	94.817 109
51	KI= 964.3, F=133( 57, 43)	95.375 108
52	KI= 969.4, (105, 120)	98.362
53	KI= 978.3, ( 57, 71)	100.912
54	KI= 983.1, F=144(105, 120)	97.863 111
55	01000-n-C10-ANE, F=149( 57, 43)	91.620 111
56	KI=1009.8, F=152(105, 120)	100.394 110
57	KI=1022.4, F=156+157( 71, 57)	95.817 110
58	KI=1037.3, ( 57, 71)	101.580
59	KI=1037.3, ( 67, 41)	102.149
60	KI=1043.4, F=167(105, 77)	99.356 124
61	KI=1051.0, F=170(119, 134)	96.935 124
62	KI=1056.1, (105, 134)	101.619
63	KI=1057.6, ( 57, 43)	94.256
64	KI=1068.5, F=174( 71, 57)	98.203 114
65	KI=1064.1, F=175( 57, 71)	100.315 111
66	KI=1067.8, F=178(119, 134)	98.780 110
67	KI=1069.5, F=177( 57, 71)	102.968 111
68	KI=1075.6, F=179(119, 134)	98.605 111
69	KI=1093.2, F=186( 81, 67)	107.933 111
70	01100-n-C11-ANE, F=187( 57, 71)	92.986 112
71	KI=1107.8, (119, 134)	93.872
72	KI=1108.8, ( 81, 67)	107.196
73	KI=1124.6, ( 83, 82)	106.464
74	KI=1226.2, ( 57, 71)	106.429
75	KI=1162.4, F=216( 57, 43)	93.556 109
76	KI=1163.7, F=217(120, 81)	99.682 135
77	KI=1169.7, ( 57, 41)	111.850
78	01200-n-C12-ANE, F=227( 57, 43)	97.631 110
79	KI=1213.8, F=232( 57, 71)	96.180 112

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TABLE 20 (Concluded)

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## \*\*\* QUANTIFICATION REPORT \*\*\*

DIST. FUELS MASTER METHOD  
PREPARED 9/2/83 KMSIMON

DATA FILE: 17742  
STANDARDS FILE: 7000  
CALIBRATIONS FILE: 8001

I.D. NO.	COMPOUND NAME	CONC'N X REL.
80	KI=1263.6; ( 57, 43)	97.097
81	KI=1272.7; ( 57, 113)	81.0 <del>888</del>
82	KI=1274.9; (141, 142)	99.987
83	*1300-n-C13-ANE, F=257( 57, 71)	97.821 109
84	KI=1376.3; F=275( 57, 71)	103.018 107
85	*1400-n-C14-ANE, F=279( 57, 43)	96.071 109
86	*1500-n-C15-ANE, F=296( 57, 43)	94.471 108

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TABLE 21. FEATURE IDENTIFICATIONS, WITH BOILING POINTS  
AND KOVATS INDICES (C<sub>1</sub> - C<sub>7</sub> RANGE)

FID Feature Number	Feature Characteristic Masses [1]	Identification	Spec. ID Conf. [2]	Boiling Pt. (°C)		ΔBP (Calc.- Lit.)	NRC KI's	
				Calc. [3]	Literature		FID	MS
003	43, 41, 39(58)	n-Butane	4	-	-0.50		400.0	400.0
004	41, 43, 57(72)	2-Methylbutane	3	-	27.85		457.6	456.6
005	43, 41, 42(72)	n-Pentane	4	36.07	36.074		500.0	500.0
009	71, 57, 43	2,2-Dimethylbutane	3	42.70	49.74	-7.04	520.1	516
010	-	-					549.7	
011	-	-					552.4	
012	43, 41, 71(84, 84)	2-Methylpentane	3	55.75	60.271	-4.52	560.4	556
013	57, 41, 56(86)	3-Methylpentane	3	61.38	63.282	-1.90	577.3	571
014	57, 41, 43(86)	n-Hexane	4	68.74	68.74	0	600.0	600.0
018	56, 41, 69	Methylcyclopentane	3	76.11	71.812	4.30	624.8	626.4
020	57, 43, 41	2,3-Dimethylpentane or isomer	2	78.35	80.5	-2.15	632.4	635.2
021	71, 43, 70	3,3-Dimethylpentane	3	84.46	86.064	-1.60	653.0	655.3
022	84, 56, 41	Cyclohexane	3	85.40	80.738	4.66	656.1	658.1
023	78, 77, 50	Benzene	3	84.21	80.1	6.11	658.8	662.3
024	56, 41, 57	2,3-Dimethylpentane	3	89.22	89.784	-0.56	669.0	671.2
025	43, 85, 41	2-Methylhexane	3	89.61	90.052	-0.44	670.4	673.3
026	43, 70, 41(71, 100)	3-Methylhexane	3	91.70	91.850	-0.15	677.4	679.7
027	70, 55, 56(98, 41)	1,3-Dimethylcyclopentane ( <u>trans</u> )	3	92.41	90.773	1.64	679.8	681.0
028	70, 55, 56(98)	1,3-Dimethylcyclopentane ( <u>cis</u> )	3	93.07	91.725	1.35	682.0	682.8
029	70, 56, 55(98)	1,2-Dimethylcyclopentane ( <u>trans</u> )	3	93.85	91.869	1.98	684.6	685.2
030	43, 70, 71	3-Ethylpentane	3	94.20	93.475	0.73	685.8	686.8
031	43, 41, 71(100)	n-Heptane	4	98.43	98.427	0	700.0	700.0

#### Footnotes

- [1] First 3 masses are the 3 most intense, listed in order of decreasing intensity. Additional masses, in random order in parentheses, are of assistance in identification. Underlined masses were used in GC/MS quantitation.
- [2] Specific Identification Confidence Level.  
4 = known standard;  
3 = "certain";  
2 = probably correct;  
1 = possibly correct;  
— = not identified.
- [3] Calculated from GC/FID retention times by interpolating between known boiling points of normal alkanes.

- [4] Mayes & Pitzer (reference in text). Column programmed from 35°C to 200°C at 1°C/min.
- [5] Schröder (reference in text). Isothermal KI's at various temperatures. Lowest listed temperature used in every case.
- [6] Brodeur (reference in text). Isothermal KI's, mostly at 80°C.
- [7] Smith, Harper & Jaber (reference in text). Column programmed from 10°C to 210°C at 5°C/min.

TABLE 21 (Concluded)

FID Feature Number	AKI (FID-MS)	Literature RI's				Probable # Carbons (MW)	Class (8)	Class ID Conf. (9)
		OV-101 [4]	Squalene [5]	SE-30 [6]	SE-30 [7]			
003	0.0	400.0	400.0	400.0	400.0	4(58)	NA	++
004	1.0	444.94	473.8		446.3	5(72)	BA	+
005	0.0	500.0	500.0	500.0	500.0	5(72)	NA	++
009			535		527.7	6(86)	BA	+
010								
011								
012		561.64	547		562.4	6(86)	BA	+
013		578.11	583.1		578.7	6(86)	BA	+
014	0.0	600.0	600.0	600.0	600.0	6(86)	NA	++
018	-1.6	620.07	624.3	634	622.0	6(84)	C/E	+
020	-2.8	622.82	629.1		629.1	7(100)	BA	+
021	-2.3	646.27	656			7(100)	BA	+
022	-2.0	647.29	658.4	669	653.6	6(84)	C/E	+
023	-3.5	642.11	634.3	659	644.5	6(78)	SB	+
024	-2.2	641.36	649.6			7(100)	BA	+
025	-2.9	659.24	666		649.5	7(100)	BA	+
026	-2.3	649.11	675.5		677.3	7(100)	BA	+
027	-1.2		683.4		679.6	7(98)	C/E	+
028	-0.8		679.4		681.9	7(98)	C/E	+
029	-0.6		685.7		684.4	7(98)	C/E	+
030	-1.0	681.54	684.7			7(100)	BA	+
031	0.0	700.0	700.0	700.0	700.0	7(100)	NA	++

## [8] Class Code.

NA normal alkanes  
 BA branched alkanes  
 C/E cycloalkanes/alkenes  
 B dienes, bicyclics, or cyclic alkenes  
 SB benzene and substituted benzenes  
 SN naphthalene and substituted naphthalenes  
 AE alcohols or ethers  
 KA ketones or aldehydes  
 T triply hydrogen deficient - any combination of 3 rings and/or double bonds.

## [9] Class Identification Confidence Level.

++ = known standard;  
 + = probably correct;  
 o = possibly correct;  
 - = just a guess.

TR tetraline



BC decaline



I indane



TABLE 22. FEATURE IDENTIFICATIONS, WITH BOILING POINTS  
AND KOVATS INDICES (C<sub>7</sub> - C<sub>8</sub> RANGE)

FID Feature Number	Feature Characteristic Masses [1]	Identification	Spec. ID Conf. [2]	Boiling Pt. (°C)		AMP (Calc.- Lit.)	NRC KI's	
				Calc. [3]	Literature		FID	MS
031	<u>43,41,71</u> (100)	n-Heptane	4	98.43	98.427	0	700.0	700.0
036	<u>83,55,41</u> (98)	Methylcyclohexane	3	101.84	100.93	0.91	712.5	710.9
037	<u>55,69,41</u> (97)	1,1,3-Trimethylcyclopentane or isomer	2	102.69	104.89	-2.20	715.6	714.4
038	<u>57,41,56</u> (99)	2,2,3,3-Tetramethylbutane	3	103.64	106.5	-2.9	719.1	719.6
039	<u>69,68,41</u> (98)	Ethylcyclopentane	3	105.46	103.47	1.99	725.8	725.0
*040	<u>57,43,71</u> ( <u>61,69</u> ) <u>43,57,99</u> only	2,5-Dimethylhexane or isomer + 4,5-Dimethyl-1-hexane or isomer	2 2	109.193 106.61	109.193 102	-2	730.0	730.7
*041	<u>85,57,43</u> (114)	2,4-Dimethylhexane or isomer	2	106.87	109.43	-2.56	731.0	732.1
042	<u>70,55,41</u> (97,112)	1a,2a,4a-1,2,4-Trimethylcyclopentane or isomer	2	107.59	109.29	-1.70	733.6	733.2
043	<u>43,71,85</u>	3,3-Diethylhexane or isomer	2	107.97	111.97	-4.00	735.0	734.5
044	<u>70,55,56</u> (97,112)	1a,2a,3a-1,2,3-Trimethylcyclopentane or isomer	2	109.66	110.2	-0.5	741.2	740.5
045	<u>71,43,70</u>	2,3,4-Trimethylpentane or isomer	2	110.22	113.47	-3.25	743.3	742.4
046	<u>43,70,71</u> (85)	2,3,3-Trimethylpentane or isomer	2	110.79	114.76	-3.97	745.4	743.8
048	<u>69,55,41</u> (112)	1,1,2-Trimethylcyclopentane or isomer	2	113.11	113.73	-0.62	753.9	751.9
049	<u>70,43,71</u> ( <u>55,114</u> )	3-Ethyl-2-methylpentane or isomer	2	113.99	115.65	-1.66	757.1	756.5
050	<u>91,92,65</u>	Toluene	3	114.43	110.6	3.8	758.8	758.2
052	<u>57,43,41</u> (114)	2-Methylheptane or isomer	2	116.21	117.65	-1.44	765.3	765.2
*053	<u>43,70,71</u> (97)	4-Methylheptane or isomer	2	116.50	117.71	-1.21	766.4	766.3
*054	<u>97,55,41</u> ( <u>112,71</u> )	2,3,4-Trimethyl-2-pentene or isomer	2	117.17	116.3	0.87	768.8	766.8
*055	<u>97,55,41</u> (112,71)	trans-1,4-Dimethylcyclohexane or isomer	2	117.67	119.35	-1.68	770.6	768.5
056	<u>43,85,41</u> (114)	3-Methylheptane or isomer	2	118.14	118.92	-0.78	772.4	772.3
057[10]	<u>41,77,56</u>	3-Methyl-1-butanol or isomer	1	118.91	132	-13	775.2	776.1
058	<u>55,83,41</u>	trans-1-Ethyl-3-methylcyclopentane or isomer	2	120.49	120.8	-0.3	781.0	779.1
059	<u>55,83,41</u> (112)	cis-1-Ethyl-3-methylcyclopentane or isomer	2	121.08	121.4	-0.32	783.2	781.0
060	<u>55,83,41</u> (112)	trans-4-Octene or isomer	2	121.41	121.4	0	784.4	782.3
062	<u>97,55,41</u> (112)	trans-1,2-Dimethylcyclohexane or isomer	2	122.10	123.42	-1.32	786.9	784.0
*064-	<u>97,55,41</u> (112)	cis-1,4-Dimethylcyclohexane or isomer	2	124.15	124.32	-0.17	794.4	792.9
061[11]				124.48		0.16	795.7	
066	<u>43,41,85</u> (114)	n-Octane	4	125.66	125.665	0	800.0	800.0

Footnotes

- \* - Possible problem in correlating GC/FID feature with GC/MS feature.  
 [1] First 3 masses are the 3 most intense, listed in order of decreasing intensity. Additional masses, in random order in parentheses, are of assistance in identification. Underlined masses were used in GC/MS quantitation.  
 [2] Specific Identification Confidence Level.  
 4 = known standard;  
 3 = "certain";  
 2 = probably correct;  
 1 = possibly correct;  
 - = not identified.  
 [3] Calculated from GC/FID retention times by interpolating between known boiling points of normal alkanes.

[4] Hayes & Pitzer (reference in text). Column programmed from 35°C to 200°C at 1°C/min.

[5] Schröder (reference in text). Isothermal KI's at various temperatures. Lowest listed temperature used in every case.

[6] Broedel (reference in text). Isothermal KI's, mostly at 80°C.

[7] Smith, Harper & Jaber (reference in text). Column programmed from 10°C to 210°C at 5°C/min.

TABLE 22 (Concluded)

FID Feature Number	AKI (FID-MS)	Literature RI's				Probable # Carbons (MW)	Class [8]	Class ID Conf. [9]
		OV-101 [4]	Squalene [5]	SE-30 [6]	SE-30 [7]			
031	0.0	700.0	700.0	700.0		7(100)	NA	++
036	1.6	715.63	720	730	715.1	7(98)	C/E	+
037	1.2		719.7			8(112)	C/E	+
038	-0.5		720.5		720.5	8(114)	NA	+
039	0.8	725.43	731	739	729.8	7(98)	C/E	+
*040	-0.7	726.53	727.1		737.3	8(114)	NA	+
						8(112)	C/E	+
*041	-1.1	728.30	730		738.4	8(114)	NA	+
042	0.4		738		740.8	8(112)	C/E	+
043	0.5	734.72	741.1		743.3	8(114)	NA	+
044	0.7		744		748.1	8(112)	C/E	+
045	0.9	743.05	748.9			8(114)	NA	+
046	1.6	747.10	755.5			8(114)	NA	+
048	2.0		763.2			8(112)	C/E	+
049	0.6	763.72				8(114)	NA	+
050	0.6	747.63	740.6	761	753.0	7(92)	SB	+
052	0.1	760.60	763.6		772.0	8(114)	NA	+
*053	0.1	762.04	766		772.7	8(114)	NA	+
*054	2.0		765.9			8(112)	C/E	+
*055	2.1	772.00		785		8(112)	C/E	+
056	0.1	768.75	771.6	778.0		8(114)	NA	+
057[10]	-0.9					5(88)	AE	-
058	1.9				784.1	8(112)	C/E	+
059	2.2		783.9		786.7	8(112)	C/E	+
060	2.1		783.6			8(112)	C/E	+
062	2.9	791.91	801.8	804	788.8	2(112)	C/E	+
*064- 065[11]	1.5		802	810		8(112)	C/E	+
066	0.0	800.0	800.0	800.0	800.0	8(114)	NA	++

## [8] Class Code.

- NA normal alkanes  
 BA branched alkanes  
 C/E cycloalkanes/alkenes  
 D dienes, bicyclics, or cyclic alkenes  
 SB benzene and substituted benzenes  
 SN naphthalene and substituted naphthalenes  
 AE alcohols or ethers  
 KA ketones or aldehydes  
 1 triply hydrogen deficient - any combination of  
 3 rings and/or double bonds.

## [9] Class Identification Confidence Level.

- ++ = known standard;  
 + = probably correct;  
 o = possibly correct;  
 - = just a guess.

[10] The mass spectrum is extremely weak, but could fit 3-methyl-1-butanol. The boiling point of that molecule is off by 13°, but we have no data showing relative retention times for alcohols vs. alkanes.

TT tetraline



DC decaline



I indane



[11] Scans on either side of 0829 (FE = 064-045) were examined for changing mass spectral patterns, but no change was evident. It is possible that two compounds with very similar boiling points and mass spectra coelute at this feature.

TABLE 23. FEATURE IDENTIFICATIONS, WITH BOILING POINTS  
AND KOVATS INDICES (C<sub>8</sub> - C<sub>9</sub> RANGE)

FID Feature Number	Feature Characteristic Masses [1]	Identification <sup>2</sup>	Spec. ID Conf. [2]	Boiling Pt. (°C)		AMP (Calc. - Lit.)	KOVATS	
				Calc. [3]	Literature		FID	MS
066	43.41.85(114)	n-Octane	4	125.66	125.665	0	800.0	800.0
071	43.41.85	2,3,5-Trimethylbenzene or isomer	1	126.75	131.31	-2.56	812.3	810.7
073	33.27.41(112, 37)	cis-1,2-Dimethylcyclohexane or isomer	2	129.95	129.720	0.23	817.0	814.7
074	37.35.41(113)	2,2-Dimethylheptane or isomer	2	130.23	132.60	-2.06	818.2	816.0
075	33.33.83(112)	Ethylcyclohexane or isomer	2	131.62	131.703	-0.76	821.3	820.8
076	27.111.41(126, 32)	1,1,3-Trimethylcyclohexane or isomer	1	131.74	136.635	-4.89	824.2	824.5
077	27.111.55(126, 37)	1a,3a,5a-1,2,5-Trimethylcyclohexane or isomer	1	132.21	130.41	-4.20	825.7	825.9
078	43.37.41(128)	2,6-Dimethylheptane or isomer	2	132.74	130.21	-2.07	828.1	827.5
079	37.41.43(99)	2,5-Dimethylheptane or isomer	2	134.32	136.0	-1.68	834.4	833.3
082	27.111.55(126)	1a,2a,4a-1,2,4-Trimethylcyclohexane or isomer	1	136.30	140	-3.6	842.7	839.2
083	43.41.57(112)	3-Ethyl-2-methylbenzene or isomer	2	136.79	138	-1.21	844.2	842.4
088	21.104.63	Ethylbenzene	3	136.35	136.0	3.35	854.4	852.3
089	43.35.41(95)	2,3-Dimethylheptane or isomer	2	139.78	140.5	-0.72	854.1	853.3
090	37.43.41(128)	4-Ethylheptane or isomer	2	140.75	141.2	-0.45	858.0	858.9
091	21.104.105	1,4-Dimethylbenzene or isomer	2	141.30	136.351	2.95	862.2	860.5
092	43.41.85(128, 79)	4-Methyloctane or isomer	2	141.72	142.48	-0.76	863.8	862.9
093	43.37.41(128, 113)	2-Methyloctane or isomer	2	142.00	143.26	-1.26	865.0	864.3
095	37.41.43(128, 96)	3-Ethylheptane or isomer	2	143.34	143.0	0.34	869.5	868.5
096	37.41.43(128, 99)	3-Methyloctane or isomer	2	143.54	144.18	-0.62	871.2	870.4
098	27.83.123	[C <sub>10</sub> -cycloalkane or alkane]	-	146.07			877.1	873.9
099	27.33.41(126)	2,4,6-Trimethyl-2-hexene or isomer	1	146.70			880.0	877.1
100	33.27.41(126)	[C <sub>9</sub> -substituted benzene or cyclohexane]	-	146.18			881.6	879.7
102	21.104.105	1,2-Dimethylbenzene	3	146.91	146.411	2.50	884.5	882.7
106	27.41.55(140, 123)	[C <sub>10</sub> -C/E]	-	146.46			884.6	882.3
107	27.33.41(126)	1-Ethyl-4-methylcyclohexane (trans) or isomer	2	149.79	151.09	-2.90	896.9	894.1
108	27.33.41(141, 123)	1-Ethyl-4-methylcyclohexane (cis) or isomer	2	150.22	152.6	-2.38	897.6	896.5
109	27.43.41(126)	n-Nonane	4	150.81	150.81	0	900.0	900.0

#### Footnotes

- - Terms in braces are general descriptions, where specific identifications are not possible.  
 • - Possible problem in correlating GC/FID feature with GC/MS feature.  
 [1] First 3 masses are the 3 most intense, listed in order of decreasing intensity. Additional masses, in random order in parentheses, are of assistance in identification. Underlined masses were used in GC/MS quantitation.  
 [2] Specific Identification Confidence Level.  
 4 = known standard;  
 3 = "certain";  
 2 = probably correct;  
 1 = possibly correct;  
 - = not identified.

- [3] Calculated from GC/FID retention times by interpolating between known boiling points of normal alkanes.  
 [4] Hayes & Fitzer (reference in text). Column programmed from 35°C to 200°C at 1°C/min.  
 [5] Schröder (reference in text). Isothermal KI's at various temperatures. Lowest listed temperature used in every case.  
 [6] Brodual (reference in text). Isothermal KI's, mostly at 80°C.  
 [7] Smith, Harper & Jaber (reference in text). Column programmed from 15°C to 210°C at 9°C/min.

TABLE 23 (Concluded)

FID Feature Number	AKI (FID-MS)	Literature RI's				Probable # Carbons (MW)	Class [8]	Class ID Conf. [9]
		OV-101 [4]	Squalane [5]	SE-30 [6]	SE-30 [7]			
066	0	800.0	800.0	800.0	800.0	8(114)	NA	++
071	1.6		810.7			9(128)	NA	o
073	2.3	820.39	820.0	836		8(112)	C/E	+
*074	-2.2	817.31	814.9			9(128)	NA	+
075	0.5		821.0			8(112)	C/E	+
076	-4.30	830.35	840.4		831.0	9(128)	C/E	+
*077	-0.20	825.38			825.3	9(128)	C/E	+
078	0.60	827.06	826.7			9(128)	NA	+
079	1.10	833.18	832.3		833.6	9(128)	NA	+
082	3.50	844.82				9(128)	C/E	+
083	1.00		841.6			9(128)	NA	+
088	2.10	843.07	829.9	864	864.9	8(106)	SB	+
089	2.00		853.5			9(128)	NA	+
090	1.10	858.32	856.6			9(128)	NA	+
091	1.70	852.80	861	864	864.8	8(106)	SB	+
092	0.90	861.66	862.3		864.5	9(128)	NA	+
093	0.70	862.66	864.6		869.6	9(128)	NA	+
095	1.0	867.96	866			9(128)	NA	+
096	0.80	869.43	869.6		873.9	9(128)	NA	+
098	3.20					10(140)	C/E	o
099	2.90					9(126)	C/E	+
100	2.90					9(126)	C/E	+
102	1.80	874.53	883	886	875.3	8(106)	SB	+
106	2.30					10(140)	C/E	+
107	1.80				881.3	9(126)	C/E	+
108	2.10	903.98				9(126)	C/E	+
109	0	900.0	900.0	900.0	900.0	9(128)	NA	++

## [8] Class Code.

NA normal alkanes  
 BA branched alkanes  
 C/E cycloalkanes/alkanes  
 D dienes, bicyclics, or cyclic alkanes  
 SB benzene and substituted benzenes  
 NN naphthalene and substituted naphthalenes  
 AE alcohols or ethers  
 NA ketones or aldehydes  
 T triply hydrogen deficient - any combination of 3 rings and/or double bonds.

## [9] Class Identification Confidence Level.

++ = known standard;  
 + = probably correct;  
 o = possibly correct;  
 - = just a guess.

TT tetraline



BC pentaline



I indane



TABLE 24. FEATURE IDENTIFICATIONS, WITH BOILING POINTS  
AND KOVATS INDICES (C<sub>9</sub> - C<sub>10</sub> RANGE)

FID Feature Number	Feature Characteristic Masses [1]	Identification #	Spec. ID Conf. [2]	Boiling Pt. (°C)		ABP (Calc.- Lit.)	NRC KI's	
				Calc. [3]	Literature		FID	MS
109	<u>57, 43, 41</u> (128)	n-Nonane	4	150.81	150.81	0	900.0	900.0
112	<u>67, 82, 81</u> (124)	2-Methyloctanhydropentalene or isomer	1	152.78			908.4	904.6
113	<u>82, 55, 83</u> (69)	(1-Methylethyl)cyclohexane or isomer	2	153.33	154.763	-1.43	910.8	907.5
*114	<u>81, 67, 57</u>	2-Methyloctanhydropentalene or isomer	1	154.06			913.9	911.6
*116	<u>105, 43, 85</u> (120)	[C <sub>10</sub> -alkane] + (1-methylethyl)benzene or isomer	2	154.93	152.392	2.54	917.7	916.7
*117	<u>55, 41, 97</u> (115)	[Alkene or cycloalkane >C <sub>7</sub> ]	-				920.1	918.3
*118	<u>83, 55, 82</u> (126)	Propylcyclohexane or isomer	2	156.09	156.724	-0.63	922.6	919.6
*119	<u>57, 43, 71</u> (142, 99)	2,5-Dimethyloctane or isomer	2	156.57	156-8	0	924.7	923.9
*120	<u>57, 43, 41</u>	2,7-Dimethyloctane or isomer	2	157.40	159.9	-2.30	929.1	928.5
*122	<u>57, 71, 43</u> (142, 113)	2,6-Dimethyloctane or isomer	2	158.42	160	-1.4	933.5	932.8
123	<u>57, 41, 43</u> (98)	3-Ethyl-2-methylheptane or isomer	1	160.00	164	-6.00	939.4	938.2
125	<u>69, 70, 55</u> (140, 125)	1,4-Dimethylcyclooctane or isomer	1	161.36			945.3	940.6
126	<u>91, 65, 120</u>	Propylbenzene or isomer	2	161.86	159.2	2.66	947.4	945.7
127	<u>69, 55, 111</u> (140)	1-Ethyl-2,3-dimethylcyclohexane or isomer	1	162.94			952.0	950.3
128	<u>57, 43, 41</u> (142, 98)	3-Ethyl-2-methylheptane or isomer	1	163.27	166	-2.73	953.5	952.4
129	<u>105, 120, 77</u>	1-Ethyl-3-methylbenzene or isomer	2	163.81	161.305	2.50	955.8	954.3
130	<u>81, 41, 57</u>	3-(2-methylpropyl)cyclohexane or isomer	1	164.06			956.8	957.5
131	<u>105, 120, 77</u>	1,3,5-Trimethylbenzene or isomer	2	164.90	164.7	0.20	960.5	960.5
*132	<u>57, 43, 41</u> (142)	4-Methylnonane or isomer	2	165.29	165.7	-0.41	962.1	961.3
*133	<u>57, 43, 41</u>	2-Methylnonane or isomer	2	165.89	166.8	-0.9	964.7	964.2
135	<u>71, 57, 41</u> (125)	[C <sub>10</sub> -alkane or cycloalkane]	-	166.52	166		967.4	966.4
136	<u>57, 71, 41</u> <u>105, 120, 57</u>	3-methylnonane or isomer + 1-Ethyl-2-methylbenzene or isomer	1 2	167.8 165.153		-0.5 2.18	970.8	970.4
137	<u>97, 55, 41</u> (140)	1-Methyl-4-(1-methylethyl)cyclohexane (cis) or isomer	2	167.77	168.5	-0.73	972.7	973.9
139	<u>55, 97, 41</u> (140)	4-Ethyl-2-octene or isomer	1	168.73			976.9	976.1
140	<u>55, 83, 69</u> (139)	5-Methyl-4-nonene or isomer	1	169.27			979.2	978.2
142	<u>55, 41, 69</u>	1-Decene or isomer	2	169.86	170.57	-0.71	981.7	980.6
144	<u>105, 120, 77</u>	1,2,4-Trimethylbenzene or isomer	2	170.90	169.5	1.40	986.2	984.1
145	<u>97, 55, 69</u> (140)	[C <sub>10</sub> -alkane or cycloalkane]	-	171.55			989.8	985.5
146	<u>55, 97, 41</u> (140)	4-Propyl-3-heptane or isomer	1	172.61			993.5	990.3
149	<u>57, 43, 41</u> (142)	n-Decane	4	174.12	174.123	0	1000.0	1000.0

Footnotes

- # - Terms in braces are general descriptions, where specific identifications are not possible.  
 \* - Possible problem in correlating GC/FID feature with GC/MS feature.  
 [1] First 3 masses are the 3 most intense, listed in order of decreasing intensity. Additional masses, in random order in parentheses, are of assistance in identification. Underlined masses were used in GC/MS quantitation.  
 [2] Specific Identification Confidence Level.  
 4 = known standard;  
 3 = "certain";  
 2 = probably correct;  
 1 = possibly correct;  
 - = not identified.

- [3] Calculated from GC/FID retention times by interpolating between known boiling points of normal alkanes.  
 [4] Mayes & Pitzer (reference in text). Column programmed from 35°C to 200°C at 1°C/min.  
 [5] Schröder (reference in text). Isothermal KI's at various temperatures. Lowest listed temperature used in every case.  
 [6] Broedel (reference in text). Isothermal KI's, mostly at 80°C.  
 [7] Smith, Harper & Jaber (reference in text). Column programmed from 10°C to 210°C at 5°C/min.



TABLE 24 (Concluded)

FID Feature Number	AKI (FID-MS)	Literature KI's				Probable # Carbons (MW)	Class [8]	Class ID Conf. [9]
		OV-101 [4]	Squalane [5]	SE-30 [6]	SE-30 [7]			
109	0.0	900.0	900.0	900.0	900.0	9(128)	NA	++
112	3.8					9(124)	D	+
113	3.3	912.85				9(126)	C/E	+
*114	2.3					10(138)	D	o
*116						10(142)	BA	+
	1.0	908.92	901	915	905.1	9(120)	SB	+
*117	1.8					-	C/E	-
*118	3.0	923.29		915		9(126)	C/E	+
*119	0.8					10(142)	BA	+
*120	0.6	929.14				10(142)	BA	+
*122	0.7	933.62				10(142)	BA	+
123	1.2	946.34				10(142)	BA	o
125	4.7					10(140)	C/E	+
126	1.7	937.01	929.74	944	937.2	9(120)	SB	+
127	1.7					10(140)	C/E	+
128	1.1	946.34				10(142)	BA	+
129	1.5	944.83	943.07		944.9	9(120)	SB	+
130	-0.7					10(138)	D	+
131	0.0	952.83	962.7	960	952.8	9(120)	SB	+
*132	0.8	954.97				10(142)	BA	+
*133	0.5	963.97				10(142)	BA	+
135	1.0					10(140)	C/E	+
136		970.32				10(142)	BA	+
	0.4	961.45	958.25		961.0	9(120)	SB	+
137	-1.2	983.78				10(140)	C/E	+
139	0.8					10(140)	C/E	+
140	1.0					10(140)	C/E	+
142	1.1	987.87	982.2	988		10(140)	C/E	+
144	2.1	976.91	979.7	984	975.6	9(120)	SB	+
145	3.5					10(140)	C/E	+
146	3.2					10(140)	C/E	+
149	0.0				1000.0	10(142)	NA	++

## [8] Class Code.

NA normal alkanes  
 BA branched alkanes  
 C/E cycloalkanes/alkenes  
 D dienes, bicyclics, or cyclic alkenes  
 SB benzene and substituted benzenes  
 SN naphthalene and substituted naphthalenes  
 AE alcohols or ethers  
 KA ketones or aldehydes  
 T triply hydrogen deficient - any combination of 3 rings and/or double bonds.

## [9] Class Identification Confidence Level.

++ = known standard;  
 + = probably correct;  
 o = possibly correct;  
 - = just a guess.

TT tetralins

DC decalins

I indans

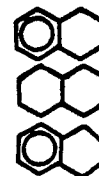


TABLE 25. FEATURE IDENTIFICATIONS, WITH BOILING POINTS  
AND KOVATS INDICES (C<sub>10</sub> - C<sub>11</sub> RANGE)

FID Feature Number	Feature Characteristic Masses [1]	Identification #	Spec. ID Conf. [2]	Boiling Pt. (°C)		ABP (Calc.- Lit.)	NRC KI's	
				Calc. [3]	Literature		FID	MS
149	57,43,41(128)	n-Decane	4	174.12	174.123	0	1000.0	1000.0
150	105,77,134	(1-Methylpropyl)benzene or isomer	2	174.96	173.305	1.66	1003.9	1001.4
152	105,120,77	1,2,3-Trimethylbenzene or isomer	2	177.14	176.084	1.06	1013.9	1010.7
153	57,41,43	{Branched alkane + ?}	-	177.84			1017.0	1013.3
154	119,91,134	1-Methyl-4-(1-methylethyl)benzene or or isomer	2	-	{177.13 177.10}		1019.3	1015.5
155	119,91,41(134)	1-Methyl-2-(1-methylethyl)benzene or or isomer	2	178.49	{178.18 178.35 178.15}	avg. 0.26	1020.1	1016.9
*156	71,43,57	{Probably C <sub>11</sub> branched alkane +	-	179.10			1022.9	1022.3
*157		C <sub>12</sub> cycloalkane}	-	179.73			1025.8	
158	55,69,41(139)	{Alkene, probably C <sub>11</sub> (NW 154)}	-	180.28			1028.4	1024.3
159	41,57,43(154)	{Alkene, probably C <sub>11</sub> (NW 154)}	-	181.00			1031.6	1027.7
161	57,41,71	6-Ethyl-2-methyloctane or isomer (NW 156)	1	181.64	180.4	1.24	1034.6	1033.6
163	41,57,67(138)	trans-Decahydronaphthalene + [C <sub>11</sub> C/E]	3	182.50	187.25	-4.75	1038.5	1037.3
*165	55,41,81(138)	{Alkene, alkyne or diene (NW 154-168)}	-	183.53			1043.2	1040.4
*166	105,119,134	1,2-Diethylbenzene or isomer	2	183.86	{183.46 183.423}	avg. 0.42	1044.7	1042.9
167	105,134,77	1-Methyl-4-propylbenzene or isomer	2	184.21	{183.34 183.80}	avg. 0.64	1046.4	1044.4
168	105,134,77(69)	1-Methyl-2-propylbenzene or isomer	2	184.88	{184.83 184.80}	avg. 0.06	1049.4	1047.2
169	91,92,57(134)	[C <sub>4</sub> -benzene]	1	185.13			1050.6	1048.6
170	119,134,91	1-Ethyl-2,4-dimethylbenzene or isomer	1	185.82			1053.8	1052.0
173	57,105,43	5-Methyldecane or isomer + [C <sub>4</sub> -benzene]	2 1	186.73	{186.11 187.5}	avg. -0.08	1057.9	1057.6
174	71,57,43(156)	4-Methyldecane or isomer	2	187.36	{187.89 186}	avg. 0.42	1060.8	1060.5
175	57,43,71	2-Methyldecane or isomer	2	188.17	{189.19 188.6}	avg. -0.72	1064.6	1064.1
176	55,41,81	{Cycloalkane/alkene (NW=154)}	-	188.54			1066.2	1065.8
*177	119,57,41(134)	3-Methyldecane or isomer +	2	~189.7	189.3	~0.4	1070.6	1069.8
*178	57,71,85(127)	[C <sub>4</sub> -benzene]	-					
179	119,97,55(154,134)	6-Methyl-4-decene or isomer 2-Ethyl-1,3-dimethylbenzene or isomer	2 2	191.33	190.01	1.32	1079.0	1076.3
180	55,97,69(154)	3-Methyl-4-decene or isomer	1	191.90			1081.6	1078.8
181	69,55,41(154,134)	1-Ethyl-2-propylcyclohexane or isomer	2	192.48	194.2	-1.72	1084.3	1081.1
182	55,69,41(168)	2,2-Dimethyl-3-decene or isomer	1	193.10			1087.2	1083.3
183	97,55,69(154)	3-Methyl-4-decene or isomer	1	193.59			1089.4	1086.2
184	55,69,83(154)	{Cycloalkane/alkene NW=154}	-	193.89			1090.8	1087.3
186	81,67,41(152)	1-Methyl-trans-bicyclo[4.4.0]decane + ?	1	195.02	205	-9.98	1096.0	1093.2
187	57,43,71(156)	n-Undecane	4	195.89	195.89	0	1100.0	1100.0

Footnotes

# - Terms in braces are general descriptions, where specific identifications are not possible.

\* - Possible problem in correlating GC/FID feature with GC/MS feature.

[1] First 3 masses are the 3 most intense, listed in order of decreasing intensity. Additional masses, in random order in parentheses, are of assistance in identification. Underlined masses were used in GC/MS quantitation.

[2] Specific Identification Confidence Level.

4 = known standard;  
3 = "certain";  
2 = probably correct;  
1 = possibly correct;  
- = not identified.

[3] Calculated from GC/FID retention times by interpolating between known boiling points of normal alkanes.

[4] Hayes & Pitzer (reference in text). Column programmed from 35°C to 200°C at 1°C/min.

[5] Schröder (reference in text). Isothermal KI's at various temperatures. Lowest listed temperature used in every case.

[6] Broedel (reference in text). Isothermal KI's, mostly at 80°C.

[7] Smith, Harper & Jaber (reference in text). Column programmed from 10°C to 210°C at 5°C/min.

TABLE 25 (Concluded)

FID Feature Number	AKI (FID-MS)	Literature KI's				Probable # Carbons (MW)	Class (8)	Class ID Conf. (9)
		OV-101 (4)	Squalane (5)	SE-30 (6)	SE-30 (7)			
149	0.0	1000.0	1000.0	1000.0	1000.0	10(142)	NA	++
150	2.5	995.09	983.15	1000		10(134)	SB	+
152	3.2	1003.68	1004.31	1009		9(120)	SB	+
153	3.7					11-12(154-170)	BA	o
154	3.8	1009.38	1004.39	1013		10(134)	SB	+
155	3.2		1010.42			10(134)	SB	+
*156	0.6					11(156)	BA	o
*157	3.5					12(168)	C/E	+
158	4.1					11(154)	C/E	+
159	3.9					11(154)	C/E	+
161	1.0					11(156)	BA	+
163	1.2	1042.88		1049		10(138) 11(154)	DC C/E	+
*165	2.8					11-12(154-168)	C/E or D	-
*166	1.8		1036	1047		10(134)	SB	+
167	2.0	1039.05	1032		1034.7	10(134)	SB	+
168	2.2	1049.75	1039			10(134)	SB	+
169	2.0					10(134)	SB	+
170	1.8				1041.6	10(134)	SB	+
173	0.3					11(156) 10(134)	BA SB	+
174	0.3	1061.06				11(156)	BA	+
175	0.5	1064.77				11(156)	BA	+
176	0.4					11(154)	C/E	o
*177	0.8					10(134)	SB	+
*178						11(156)	BA	+
179						11(154)	C/E	+
	2.7	1073.15	1064.97		1067.1	10(134)	SB	+
180	2.8					11(154)	C/E	+
181	3.2					11(154)	C/E	+
182	3.9					12(168)	C/E	+
183	3.2					11(154)	C/E	+
184	3.5					11(154)	C/E	+
186	2.8					11(152)	DC or D	o
187	0	1100.0	1100.0	1100.0	1100.0	11(156)	BA	++

## (8) Class Code.

NA normal alkanes  
 BA branched alkanes  
 C/E cycloalkanes/alkenes  
 D dienes, bicyclics, or cyclic alkanes  
 SB benzene and substituted benzenes  
 SN naphthalene and substituted naphthalenes  
 AK alcohols or ethers  
 RA ketones or aldehydes  
 T triply hydrogen deficient - any combination of 3 rings and/or double bonds.

## (9) Class Identification Confidence Level.

++ = known standard;  
 + = probably correct;  
 o = possibly correct;  
 - = just a guess.

TT tetralins



DC decalins



I indane



TABLE 26. FEATURE IDENTIFICATIONS, WITH BOILING POINTS  
AND KOVATS INDICES (C<sub>11</sub> - C<sub>12</sub> RANGE)

FID Feature Number	Feature Characteristic Masses [1]	Identification #	Spec. ID Conf. [2]	Boiling Pt. (°C)		AMP (Calc. - Lit.)	MRC KI's	
				Calc. [3]	Literature		FID	MS
187	<u>57.42.71</u> (156)	n-Undecane	4	195.89	195.89	0	1100.0	1100.0
*189	<u>71.43.41</u>	{Branched alkane}	-	196.80			1104.4	1103.6
*191	<u>119.134.91</u>	C <sub>4</sub> -Benzene + {Unknown}	-	197.61			1108.4	1105.1
*193	<u>119.67.41</u> (152,134)	C <sub>4</sub> -Benzene + 2-Methyl-trans-bicyclo[4.4.0]decane or isomer	1	198.46 208	-9.54		1112.6	1109.0
*194	<u>57.43.41</u> (131)	2,8-Dimethylundecane or isomer + {Cycloalkane or alkene}	1	199.10			1115.8	1116.2
*195	<u>57.43.41</u> (137)	2,7-Dimethylundecane or isomer + {Unknown}	1	199.51			1117.7	1117.4
*199	<u>83.55.82</u>	Pentylcyclohexane or isomer	1	201.40	203.67	-2.27	1127.0	1126.0
*200	<u>71.57.85</u>	C <sub>12</sub> -Branched alkane	-	201.90			1129.4	
*205	<u>117.115.133</u>	4-Methylindan or isomer + C <sub>3</sub> -Benzene + 5-methyl-5-undecene or isomer	1	204.00	203.0	1.0	1139.7	1136.2
*206	<u>119.134.91</u>	1,2,3,4-Tetramethylbenzene or isomer + C <sub>3</sub> -Benzene + {cycloalkane or alkene}	1	204.24	205.04	-0.80	1141.0	1139.8
*207	<u>57.41.55</u>	{Triply hydrogen deficient molecule + Cycloalkane or alkene}	-	204.87			1144.0	1144.3
*208	<u>105.106.91</u>	p-Isobutyltoluene or isomer + {Cycloalkane or alkene} + Tetralin or isomer	1	205.75	196 207.57	9.75 -1.82	1148.3	1146.4
*210	<u>69.41.43</u>	2,2-Dimethyl-3-decene or isomer + C <sub>3</sub> -Benzene + {doubly hydrogen deficient molecule}	1	206.62			1152.6	1149.4
211	<u>57.41.43</u>	6-Methylundecane or isomer	1	207.11			1155.0	1154.2
212	<u>43.57.71</u>	C <sub>5</sub> -Benzene + 5-Methylundecane or isomer	1	207.33			1156.1	1155.7
214	<u>71.43.57</u>	C <sub>5</sub> -Benzene + 4-Methylundecane or isomer	1	208.09	204	3.33	1159.8	1159.3
216	<u>57.43.41</u>	2-Methylundecane or isomer + 2,3-Dimethyldecahydronaphthalene or isomer + {cycloalkane or alkene}	1	208.98			1164.2	1163.8
*217	<u>128.129.51</u>	Naphthalene	3	210.24	217.96	-7.72	1170.4	1166.2
*218	<u>57.41.71</u>	3-Methylundecane or isomer	1	210.46	208	-2.46	1171.4	1169.8
*219	<u>57.41.55</u> (131)	1,2-Dimethylindan + 4,6,8-Trimethyl-1-nonene or isomer	1	211.38	209	-2.38	1175.9	1175.4
*220	<u>97.55.41</u>	1-Ethyl-2,4,5-trimethylbenzene or isomer + 1-Methyl-2-pentylcyclohexane or isomer	1	212.13	213	-0.87	1179.7	1178.1
*221	<u>55.41.69</u>	1-Dodecene or isomer + {1-C <sub>2</sub> -Indan or C <sub>1</sub> -tetralin} + C <sub>2</sub> -decalin	1	212.50	212.36	-0.86	1181.4	1180.8
*222	<u>131.41.55</u>	1-Ethyl-1-methylindan or isomer + {C <sub>2</sub> -Indan or C <sub>1</sub> -tetralin + unknown} + C <sub>4</sub> -benzene	1	213.31	218	-4.69	1185.3	1185.6
*223	<u>97.55.69</u>	1-Methyl-4-(1-methylbutyl)cyclohexane or isomer	1	214.17			1189.6	1187.1
*224	<u>133.83.69</u>	C <sub>3</sub> -Benzene + C <sub>4</sub> -benzene + {C <sub>12</sub> -Cycloalkane or alkene}	-	214.57			1191.5	1190.7
*225	<u>55.41.83</u>	C <sub>3</sub> -Benzene + C <sub>12</sub> -cycloalkane or alkene + C <sub>2</sub> -decalin	-	215.05			1193.9	1196.1
227	<u>57.43.71</u> (170)	n-Dodecane	4	216.28	216.28	0	1200.0	1200.0

Footnotes

- # - Terms in braces are general descriptions, where specific identifications are not possible.  
 \* - Possible problem in correlating GC/FID feature with GC/MS feature.  
 [1] First 3 masses are the 3 most intense, listed in order of decreasing intensity. Additional masses, in random order in parentheses, are of assistance in identification. Underlined masses were used in GC/MS quantitation.  
 [2] Specific Identification Confidence Level.  
 4 = known standard;  
 3 = "certain";  
 2 = probably correct;  
 1 = possibly correct;  
 - = not identified.

- [3] Calculated from GC/FID retention times by interpolating between known boiling points of normal alkanes.  
 [4] Hayes & Pitzer (reference in text). Column programmed from 35°C to 200°C at 1°C/min.  
 [5] Schröder (reference in text). Isothermal KI's at various temperatures. Lowest listed temperature used in every case.  
 [6] Broedel (reference in text). Isothermal KI's, mostly at 80°C.  
 [7] Smith, Harper & Jøker (reference in text). Column programmed from 10°C to 210°C at 5°C/min.

TABLE 26 (Concluded)

FID Feature Number	AKI (FID-MS)	Literature RI's				Probable # Carbons (MW)	Class (8)	Class ID Conf. (9)
		OV-101 (6)	Squalane (5)	SE-30 (6)	SE-30 (7)			
187	0	1100.0	1100.0	1100.0	1100.0	11(154)	NA	++
*189	0.8					11-12(154-170)	NA	+
*191	3.3					10(134)	SB	+
*193	3.6					10(134)	SB	+
				1122		11(152)	DC or D	+
*194	-0.4					12-13(170-184)	NA	+
							C/E	+
*195	0.3					12-13(170-184)	NA	+
*199	1.0					11(154)	C/E	+
*200	3.4					12(170)	NA	+
*205	3.5		1126			10(132)	I	+
						11(148)	SB	+
						12(160)	C/E	+
*206	1.2	1132.90	1130		1128.8	10(134)	SB	+
						11(148), 12(160)	SB, C/E	+,+
*207	-0.3					11(150)	T	+
						12(160)	C/E	+
*208	1.9	1136.43	1137	1137		11(148)	SB	+
						12(160)	C/E	+
						10(132)	TT	+
*210	3.2					12(160)	C/E	+
						11(148)	SB	+
						12(160)	D	+
211	0.8					12(170)	NA	+
212	0.4					11(148)	SB	+
						12(170)	NA	+
214	0.5					11(148)	SB	+
						12(170)	NA	+
216	0.4	1164.88				12-13(170-184)	NA	+
						12(160)	DC	+
						12(160)	C/E	+
*217	4.2	1156.25	1152	1152	1156.5	10(120)	SN	+
*218	1.6				1166.0	12-13(170-184)	NA	+
*219	0.5					11(148)	I	+
						12(160)	C/E	+
*220	1.6					11(148)	SB	+
						12(160)	C/E	+
*221	0.6	1188.62	1182.5			12(160)	C/E	+
						11(148), 12(160)	I or TT, DC	+,+
*222	-0.3					12(160)	I	+
						11(148)	I or TT	+
						12(162)	SB	+
*223	2.5					12(160)	C/E	+
*224	0.8					11(148), 12(162)	SB, SB	+,+
						12(160)	C/E	+
*225	-2.2					11(148), 12(160)	SB, C/E	+,+
						12(160)	DC	+
227	0	1200.0	1200.0	1200.0	1200.0	12(170)	NA	++

## [8] Class Code.

NA normal alkanes  
 BA branched alkanes  
 C/E cycloalkanes/alkenes  
 C/E cycloalkanes/alkynes  
 D dienes, bicyclic, or cyclic alkenes  
 SB benzene and substituted benzenes  
 SN naphthalene and substituted naphthalenes  
 AE alcohols or ethers  
 RA ketones or aldehydes  
 T triply hydrogen deficient - any combination of triple and/or double bonds.

## [9] Class Identification Confidence Level.

++ = known standard;  
 + = probably correct;  
 = = possibly correct;  
 - = just a guess.

TT tetralins



DC decalins



I indans



TABLE 27. FEATURE IDENTIFICATIONS, WITH BOILING POINTS  
AND KOVATS INDICES (C<sub>12</sub> - C<sub>13</sub> RANGE)

FID Feature Number	Feature Characteristic Masses [1]	Identification #	Spec. ID Conf. [2]	Boiling Pt. (°C)		ΔBP (Calc. - Lit.)	KRC KI's	
				Calc. [3]	Literature		FID	MS
227	<u>57.43</u> , 71 (170.41)	n-Dodecane	4	216.28	216.28	0	1200.0	1200.0
228	<u>95.41</u> , 81	{Bicycloalkane + ?}	-	216.94			1203.4	1203.2
231	<u>69.41</u> , <u>55</u>	6-Tridecene or isomer + 1,6-Dimethyldecahydronaphthalene or isomer	1 1	218.37	214 218	+4 0	1210.9	1208.9
232	<u>57.71</u> , 43 (184)	2,6,7-Trimethyldecane or isomer	1	219.00			1214.2	1213.4
237	<u>41.57</u> , 55	{Alkene or cycloalkane}	-	221.62			1227.8	1226.8
*238	<u>83.82</u> , 55 (168)	(4-Methylpentyl)cyclohexane or isomer	1	222.77			1233.9	1229.9
239	<u>69.41</u> , 55	1-Butyl-2-propylcyclopentane or isomer	1	223.68			1238.6	1235.7
240	<u>41.69</u> , <u>55</u> (165)	{?}	-	224.28			1241.7	1240.1
241	<u>69.41</u> , 55	1,2-Dibutylcyclopentane or isomer + ?	1	224.98			1245.4	1246.8
242	<u>131.55</u> , 97 (146)	2,3-Dihydro-4,6-dimethyl-1H-indene or isomer + ?	1 -	225.57			1248.5	1249.0
243	<u>57.71</u> , 41 (162)	(2,2-Dimethylbutyl)benzene or isomer + 2,3,4-Trimethyldecane or isomer	1 1	226.40	212.4	+14.0	1252.8	1252.2
244	<u>43.57</u> , 41	5-Methyldodecane or isomer	2	226.80	226.3	0.5	1254.8	1254.5
245	<u>71.43</u> , 57	2,3-Dimethylundecane or isomer	1	227.63			1259.3	1258.9
246	<u>57.43</u> , 71	2-Methyldodecane or isomer	1	228.54			1264.0	1263.4
247	133, 69, 41	{Substituted benzene}	-	229.23			1267.6	1267.2
248	57, 41, 43	3-Methyldodecane or isomer + ?	1	229.74			1270.2	1269.4
249	<u>57.71</u> , 43, <u>113</u>	4,6-Dimethyldodecane or isomer	1	230.30			1273.1	1272.6
*253	<u>142.141</u> , 115	2-Methylnaphthalene	3	232.11	{ 241.05 241.10	-8.94	1282.7	1276.4
-	55, 69, 41 (145)	1,1,3-Trimethyl-2,3-dihydro-1H-indene or isomer	1	233				1283.1
254	<u>141.142</u> , 115	1-Methylnaphthalene	3	234.34	{ 244.64 244.8	-10.30	1294.2	1291.7
257	<u>57.43</u> , <u>71</u> (184)	n-Tridecene	4	235.44	235.44	0	1300.0	1300.0

Footnotes

- \* - Terms in braces are general descriptions, where specific identifications are not possible.  
 \* - Possible problem in correlating GC/FID feature with GC/MS feature.  
 [1] First 3 masses are the 3 most intense, listed in order of decreasing intensity. Additional masses, in random order in parentheses, are of assistance in identification. Underlined masses were used in GC/MS quantitation.  
 [2] Specific Identification Confidence Level.  
 4 = known standard;  
 3 = "certain";  
 2 = probably correct;  
 1 = possibly correct;  
 - = not identified.

- [3] Calculated from GC/FID retention times by interpolating between known boiling points of normal alkanes.  
 [4] Hayes & Pitzer (reference in text). Column programmed from 35°C to 200°C at 1°C/min.  
 [5] Schröder (reference in text). Isothermal KI's at various temperatures. Lowest listed temperature used in every case.  
 [6] Bredael (reference in text). Isothermal KI's, mostly at 80°C.  
 [7] Smith, Harper & Jaber (reference in text). Column programmed from 10°C to 210°C at 5°C/min.

TABLE 27 (Concluded)

FID Feature Number	AEI (FID-MS)	Literature RI's				Probable # Carbons (MW)	Class (8)	Class ID Conf. (9)
		OV-101 [4]	Squalene [5]	SE-30 [6]	SE-30 [7]			
227	0	1200.0	1200.0	1200.0	1200.0	12(170)	NA	++
228	0.2					12(166)	D	+
231	2.0		1270.2			13(182) 12(166)	C/E D	+
232	0.8				1216.1	13(184)	BA	+
237	1.0					12(166)-13(182)	C/E	+
*238	4.0					12(168)	C/E	+
239	2.9					12(168)	C/E	+
240	1.6					13(180)	D	+
241	-1.4					13(182)	C/E	+
242	-0.3					11(166)	I	+
243	0.6					12(162) 13(184)	SB BA	+
244	0.3					13(184)	BA	+
245	0.4					13(184)	BA	+
246	0.6					13(184)	BA	+
247	0.4					11(168)	SB	+
248	0.8					13(184)	BA	+
249	0.5					14(190)	BA	+
*253	6.3	1267.22		1252	1265.7	11(162)	SB	+
-						12(166)	I	+
254	2.5	1281.76		1266	1276.4	11(162)	SB	+
257	0	1300.0	1300.0	1300.0	1300.0	13(184)	NA	++

## [8] Class Code.

NA normal alkanes  
 BA branched alkanes  
 C/E cycloalkanes/alkanes  
 D dienes, bicyclics, or cyclic alkenes  
 SB benzene and substituted benzenes  
 SN naphthalene and substituted naphthalenes  
 AE alcohols or ethers  
 EA ketones or aldehydes  
 T triply hydrogen deficient - any combination of 3 rings and/or double bonds.

## [9] Class Identification Confidence Level.

++ = known standard;  
 + = probably correct;  
 = = possibly correct;  
 - = just a guess.

TT tetralins



SC decalins



I indane



TABLE 23. FEATURE IDENTIFICATIONS, WITH BOILING POINTS  
AND KOVATS INDICES (C<sub>13</sub> - C<sub>16</sub> RANGE)

FID Feature Number	Feature Characteristic Masses [1]	Identification <sup>†</sup>	Spec. ID Conf. [2]	Boiling Pt. (°C)		ASP (Calc. - Lit.)	MRC KI's	
				Calc. [3]	Literature		FID	HS
257	<u>57, 43, 71</u> (184)	n-Tridecane	4	235.44	235.44	0	1300.0	1300.0
259	<u>41, 57, 43</u>	[C <sub>14</sub> Branched alkane + ?]	-	237.18			1309.6	1308.4
260	<u>57, 43, 71</u> (41)	[Branched alkane or alkane + ?]	-	237.52			1311.5	1311.8
*261 + 262	<u>57, 71, 41</u> (129)	6-Methyltridecane or isomer + [C/E]	1	-			1316.2	1316.9
264	<u>57, 55, 41</u>	[Branched alkane + ?]	-	-			1328.0	1326.7
-	<u>83, 82, 55</u> (182)	1-Heptylcyclohexane or isomer	1	-	244.9			1334.5
266	<u>41, 55, 69</u> (97)	[Cycloalkane or alkene]	-	242.41			1338.4	1339.2
270	<u>57, 71, 41</u> (85)	6-Methyltridecane or isomer	1	244.71			1351.1	1350.7
-	<u>57, 43, 41</u> (71, 69)	[Unknown]	-					1353.7
272	<u>57, 43, 71</u>	4-Methyltridecane or isomer	1	246.11			1358.9	1358.4
273	<u>57, 43, 41</u> (71)	[Branched alkane]	-	247.03			1364.0	1363.5
274	<u>57, 41, 71</u>	[Branched alkane]	-	248.18			1370.3	1369.6
275	<u>57, 71, 43</u> (85)	[Branched alkane] + 2-Ethylmethylphenylene or isomer	-	249.35	257.9	-8.55	1376.7	1376.0
278	<u>41, 97, 156</u>	[Cycloalkane or alkene] + 2,6-Dimethylmethylphenylene or isomer	1	252.37	262	-9.63	1393.4	1385.5
279	<u>57, 43, 71</u> <u>141, 156, 127</u>	n-Tetradecane + 2,7-Dimethylmethylphenylene or isomer	4 1	253.57 263	253.57 263	0 -9.43	1400.0	1400.0
*281	<u>141, 156, 57</u> (128)	1,5-Dimethylmethylphenylene or isomer +	1	254.92	265	-10.08	1407.9	1402.8
*282		[Diene, bicyclic or cyclic alkene]	-	255.44			1411.1	
*285	<u>41, 43, 69</u>	[Unknown mixture]	-	-			1422.0	1420.6
294	<u>71, 57, 43</u>	[Branched alkane]	-	264.26			1442.7	1441.9
296	<u>57, 43, 71</u>	n-Pentadecane	4	270.63	270.63	0	1500.0	1500.0
297	<u>57, 43, 71</u>	n-Hexadecane	4	286.79	286.79	0	1600.0	1600.0
-	<u>188, 80, 94</u>	Anthracene-d <sub>10</sub>	4	-				

Footnotes

- † - Terms in braces are general descriptions, where specific identifications are not possible.  
 \* - Possible problem in correlating GC/FID feature with GC/MS feature.  
 [1] First 3 masses are the 3 most intense, listed in order of decreasing intensity. Additional masses, in random order in parentheses, are of assistance in identification. Underlined masses were used in GC/MS quantitation.  
 [2] Specific Identification Confidence Level.  
 4 = known standard;  
 3 = "certain";  
 2 = probably correct;  
 1 = possibly correct;  
 - = not identified.

- [3] Calculated from GC/FID retention times by interpolating between known boiling points of normal alkanes.  
 [4] Mayes & Pitzer (reference in text). Column programmed from 35°C to 200°C at 1°C/min.  
 [5] Schröder (reference in text). Isothermal KI's at various temperatures. Lowest listed temperature used in every case.  
 [6] Broedel (reference in text). Isothermal KI's, mostly at 80°C.  
 [7] Smith, Harper & Jaber (reference in text). Column programmed from 10°C to 210°C at 5°C/min.



TABLE 28 (Concluded)

FID Feature Number	AKI (FID-MS)	Literature RI's				Probable # Carbons (MW)	Class [8]	Class ID Conf. [9]
		OV-101 [4]	Squalene [5]	SE-30 [6]	SE-30 [7]			
257	0	1300.0	1300.0	1300.0	1300.0	13(184)	NA	++
259	1.2					14(190)	BA	o
260	-0.3					13-14(160-190)	BA + C/E	-
*261 +	-0.7					14(190)	BA	o
262 }						12(166)	C/E	-
264	1.3					14-15(190-212)	BA + C/E	-
-						13(182)	C/E	+
266	-0.8					13-13(160-182)	C/E	+
270 }	0.4					14(190)	BA	+
-						15(208)	D	o
272	0.5					14(190)	BA	+
273	0.5					13-14(184-190)	BA	+
274	0.7					15(212)	BA	+
275	0.7					15(212)	BA	+
278	7.9	1366.22		1328		12(156)	SN	+
		1377.27		1387	1379.4	14(196)	C/E	+
279	0	1400.0	1400.0	1400.0	1400.0	12(156)	SN	+
				1389		14(190)	NA	++
*281 }	5.1					12(156)	SN	+
*282 }						15(208)	D	+
*285	1.4					-	C/E	-
294	0.8					15-16(212-224)	BA	+
296	0	1500.0	1500.0	1500.0	1500.0	15(212)	NA	++
297	0	1600.0	1600.0	1600.0	1600.0	16(226)	NA	++
-							Ref. Std.	++

## [8] Class Code.

NA normal alkanes  
 BA branched alkanes  
 C/E cycloalkanes/alkenes  
 D dienes, bicyclics, or cyclic alkanes  
 SN benzene and substituted benzenes  
 SN naphthalene and substituted naphthalenes  
 AE alcohols or ethers  
 KA ketones or aldehydes  
 T triply hydrogen deficient - any combination of 3 rings and/or double bonds.

## [9] Class Identification Confidence Level.

++ = known standard;  
 + = probably correct;  
 o = possibly correct;  
 - = just a guess.

TT tetraline



DC decaline



I indane



TABLE 29. NUMBER OF ISOMERS FOR  $C_nH_{2n+2}$  AND  $C_nH_{2n}$   
HYDROCARBONS VS. NUMBER OF MASS SPECTRA

Formula	Number of Isomers	Number of Mass Spectra [1]	Percent of isomers with listed mass spectra
Composition: $C_nH_{2n+2}$ (saturated hydrocarbons)			
$C_3H_8$	1	1	100
$C_4H_{10}$	2	2	100
$C_5H_{12}$	3	3	100
$C_6H_{14}$	5	5	100
$C_7H_{16}$	9	9	100
$C_8H_{18}$	18	18	100
$C_9H_{20}$	35	35	100
$C_{10}H_{22}$	75	18	24
$C_{11}H_{24}$	159	5	3
$C_{12}H_{26}$	355	5	1.4
$C_{13}H_{28}$	802	8	1.0
$C_{14}H_{30}$	1,858	5	0.3
$C_{15}H_{32}$	4,347	6	0.1
Composition: $C_nH_{2n}$			
$C_3H_6$	2	2	100
$C_4H_8$	5	5	100
$C_5H_{10}$	12	12	100
$C_6H_{12}$	29	22	76
$C_7H_{14}$	66	42	64

[1] Listed in the 1978 Index to the EPA/NIH  
Mass Spectral Data Base.

TABLE 30. FEATURES FOR WHICH CORRELATION OF GC/FID  
WITH GC/MS RESULTS WAS AMBIGUOUS

Carbon Number	Number of Features to be Identified via GC/MS	Number of Correlation Problems	Total Concentration (mg/ml) of Features with Correlation Problems	Total Concentration (mg/ml) of Features to be Identified
1-7	20	0	0	137.8
7-8	27	6	22.7	133.0
8-9	26	2	2.5	86.9
9-10	29	9	18.5	64.6
10-11	31	6	12.0	58.2
11-12	26	21	25.0	44.2
12-13	19	2	3.9	35.1
13-16	<u>19</u>	<u>4</u>	<u>2.9</u>	<u>19.6</u>
Total	197	50	87.5	579.4

$$\frac{\text{Correlation Problems}}{\text{Features to be Identified}} = \frac{50}{197} \times 100 = 25\%$$

Total sample concentration for all 295 GC/FID features = 607 mg/mL

$$\frac{\text{Conc. of Problem Features}}{\text{Conc. of Features to be Identified}} = \frac{87.5}{579} \times 100 = 15.1\%$$

TABLE 31. DIFFERENCES BETWEEN GC/FID AND GC/MS KI VALUES  
IN THE RANGE  $C_{7\frac{1}{2}}-C_{16}$ : AKI (FID-MS)

	Compound Class		
	BA	C/E	SB
Mean $\pm \sigma$	$0.8 \pm 0.7$	$1.9 \pm 1.0$	$1.6 \pm 1.0$
(No. of data points)	(19)	(11)	(15)

TABLE 32. DIFFERENCES BETWEEN GC/FID CALCULATED RELATIVE BOILING  
POINT INDICES (RBPI) AND LITERATURE BOILING POINTS FOR  
COMPOUNDS IN THE  $C_{7\frac{1}{2}}-C_{16}$  RANGE:  $\Delta BP$  (CALC.-LIT.)

	Compound Class		
	BA	C/E	SB
Mean $\pm \sigma$	$-1.6 \pm 1.9$	$-0.9 \pm 0.7$	$+2.0 \pm 1.0$
(No. of data points)	(19)	(11)	(15)

TABLE 33. DISCREPANCIES BETWEEN AFSC REPORT (J. H. Smith, et al., 1981)  
AND MONSANTO COMPANY RESULTS (See Text for explanation)

Incorrect (I) or Variant (V)		MC Assignment, (KI), (FID Feature Number)	
Assignment, (KI)			
I	Isobutane (466.3)		2-Methylbutane[isopentane] (457.6)(004)
V	2,2-Dimethylpentane (629.1)		2,4-Dimethylpentane (632.4)(020)
V	<u>cis</u> -1,2-Dimethylcyclopentane (684.4)		<u>trans</u> -1,2-Dimethylcyclopentane (685.8)(030)
I	2,2-Dimethylhexane (764.2)		
V	<u>cis</u> -1,3-Dimethylcyclohexane (775.3)		<u>trans</u> -1,4-Dimethylcyclohexane (770.6)(055)
I	1-Methyl-3-ethylcyclohexane (784.1)		<u>trans</u> -1-Ethyl-3-methylcyclopentane (781.0)(058)
I	1-Methyl-2-ethylcyclohexane (786.7)		<u>cis</u> -1-Ethyl-3-methylcyclopentane (783.2)(059)
	1,3,5-Trimethylcyclohexane (825.3)	Reported in reverse order of boiling points	
	1,1,3-Trimethylcyclohexane (831.0)		
V	1,3-Diethylbenzene (1031.4)		1,2-Diethylbenzene (1044.7)(166)
V	1,3-Dimethyl-5-ethylbenzene (1041.6)		1-Ethyl-2,4-dimethylbenzene (1053.8)(170)
V	1,2-Dimethyl-4-ethylbenzene (1067.1)		2-Ethyl-1,3-dimethylbenzene (1079.0)(179)
V	2-Methylundecane (1166.0)		3-Methylundecane (1171.4)(218)
V	2,6-Dimethylundecane (1216.1)		2,6,7-Trimethylundecane (1214.2)(232)

TABLE 34. COMPONENTS OF JP-4 IDENTIFIED IN AFESC REPORT (J. H. Smith, et al., 1981), BUT NOT FOUND IN MONSANTO COMPANY STUDY

Component, (KI)
<u>m</u> -Xylene[1,3-Dimethylbenzene] (853.9)
3,4-Dimethylheptane (859.8)
4-Ethylheptane (865.0)
1-Methyl-4-ethylbenzene (946.8)
<u>n</u> -Butylcyclohexane (1025.6)
1-Methyl-2-isopropylbenzene (1049.1) (probably the C <sub>4</sub> -benzene component of FE #173)
1,4-Dimethyl-2-ethylbenzene (1060.2) (probably the C <sub>4</sub> -benzene component of FE #178)

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TABLE 35. SUMMARY OF DISTILLATE FUEL SAMPLES RECEIVED

MRC Sample ID No.	Source	City, State	MRC Log No.
585	Indiana Fuel & Asphalt	Hammond, IN	83-2-10-585
588	Amber Refining, Inc. Winston Refining Co.	Ft. Worth, TX	83-2-14-588-00F
589	Amoco Oil Co.	Whiting, IN	83-2-14-589-00F
590	Cibro Pet. Products, Inc.	Port of Albany, NY	83-2-15-590-00F
591	Ashland Petroleum Co.	St. Paul Park, MN	83-2-22-591
592	Pride Ref. Co.	Abilene, TX	83-2-22-592
593	Wyoming Refining Co.	New Castle, WY	83-2-24-593
594	Mobil Oil	Port Arthur, TX	83-2-24-594
595	Chevron USA	El Paso, TX	83-3-4-595-00F
596	Allied Materials Corp.	Stroud, OK	83-3-4-596
597	Navajo	Antesia, NM Sample: El Paso, TX	83-3-9-597
598	Delta	Memphis, TN	83-3-9-598
599	Cities Service, Inc.	Lake Charles, LA	83-3-11-599
600	Conoco, Inc.	Ponca City, OK	83-3-11-600
601	Beacon Oil Company	Hanford, CA	83-3-15-601
602	Calcasien Ref. Co. CPI	Lake Charles, LA	83-3-18-602
603	Berry Ref. Co.	Stevens, AR	83-3-21-603
604	Atlas Processing Co.	Shreveport, LA	83-3-21-604
605	Southern Oil Co.	Sonderville, MS	83-3-22-605
606*	Arco Petroleum	Cherry Pt., WA	83-3-22-606
607	Potter (Reference Fuel)	--	83-3-23-607
608	Golden Eagle	Carson City, CA	83-3-24-608
609	Arco	Los Angeles, CA	83-3-24-609
610	Amoco	Salt Lake City, UT	83-3-24-610
611	Amoco	Boise, ID	83-3-25-611
612	Simmons Oil Co.	Black Eagle, MT	83-3-25-612
613	Exxon Company, USA Refining Dept.	Billings, MT	83-3-25-613

(continued)



TABLE 35 (continued)

MHC Sample ID No.	POSF No.	Supplier Identification	Lab Report No.	Sampling Date
585	None Assigned	ECI 413, Batch 20	DLA-600-82-D-0586	1/04/83
588	None Assigned	316, DLA-83-017	DLA-600-82-D-0646	2/15/83
		316, 017	DLA-600-82-D-0463	
589	None Assigned	3710, 3	DLA-600-82-D-0603	2/08/83
590	None Assigned	34, #34-01-83	69/20	1/18/83
			61/21	2/14/83
591	None Assigned	109, (403 H) 57-P-302	DLA-600-81-D-0354	2/22/83
		830211-1		
592	None Assigned			2/22/83
593	None Assigned	203, WY-4	DLA-600-82-D-0460	2/15/83
594	None Assigned	1365, 83-15		2/24/83
595	None Assigned			
596	None Assigned			2/04/83
597	None Assigned	2nd, DFXE-03-309/309H	DLA-600-82-D-0626	3/03/83
		AF-83-13/14		3/09/83
598	None Assigned	54, DM-216		2/16/83
599	None Assigned	22, 5-54-83-11-1		3/11/83
600	None Assigned	901, 83-2	DLA-600-82-D-0529	3/04/83
601	None Assigned	5015, 116	DLA-600-82-D-0625	3/01/83
602	None Assigned	314, 82-09	DLA-600-81-D-	3/04/83
603	None Assigned	36, 83-03	P-23720	3/20/83
			DLA-600-82-D-0609	
			DLA-600-82-D-0463	
604	None Assigned	74, AF-3	DLA-600-81-D-0433	3/20/83
605	None Assigned	6001, 83-5		3/22/83
606*	None Assigned	11, S-228	574.1	3/01/83
			551.4	3/12/83
			102.52	3/22/83
607	82-POSF-0541	Bldg. 352, 55 gallon drum	6043	3/23/83
608	None Assigned	80011, 6-83	DLA-600-82-D-0456	3/24/83
609	None Assigned	41R, 6916	95914	2/18/83
				3/24/83
610	None Assigned	327, S-J-83	DLA-600-82-D-0603	2/15/83
				3/24/83
611	None Assigned	2001, 2J83B	DLA-600-82-D-0603	3/05/83
				3/25/83
612	None Assigned	48, SOC 3, Batch #4-83		3/25/83
613	None Assigned	304, 83-5-26	P0073	3/15/83

(continued)

TABLE 35 (continued)

MRC Sample ID No.	Source	City, State	MRC Log No.
614	Coastal States Pet. Chem.	Corpus Christi, TX	83-4-12-614
615	Koch Refining	Corpus Christi, TX	83-4-14-615
616	Lake Shore Terminal Co.	Harrisville, MI	83-4-14-616
617	Chevron USA, Inc.	Pascagoula, MI	83-4-25-617
618	Getty	Delaware City, DE	83-5-11-618
619	Exxon	Baton Rouge, LA	83-5-17-619
620	Getty	Delaware City, DE	83-5-17-620
621	Coastal States	San Antonio, TX	83-5-17-621
622	Koch Refining	San Antonio, TX	83-5-17-622
623	Custer Refining	OK	83-5-17-623
624	Laketon Asphalt, Inc.	Laketon, IN	83-5-18-624
625	DE/ST & Pipeline	Dover, DE	83-5-18-625
626	Hunt Oil	Tuscaloosa, AL	83-5-19-626
627	Howell Hydrocarbons	San Antonio, TX	83-5-31-627
628	Exxon	Houston, TX	83-6-01-628
629	Peerless Dist. Co. (From Crystal Refining Co.)	Southfield, MI Carson City, MI	83-6-01-629
630	Potter	WPAFB, OH	83-6-06-630
631	Potter	WPAFB, OH	83-6-06-631
632	Potter	WPAFB, OH	83-6-06-632
633	Potter	WPAFB, OH	83-6-06-633
634	Potter	WPAFB, OH	83-6-06-634
635	Potter	WPAFB, OH	83-6-06-635
636	Mobil Torrence Refining	Norwalk, CA	83-6-07-636
637	McConnell AFB	KS	83-6-08-637
638	Pioneer Ref., LTD.	Nixon, TX	83-6-13-638
639	Amoco Oil Co.	Des Moines, IA	83-6-06-639
640	(Shale) Potter	WPAFB, OH	83-7-21-640
643	Chevron, USA Salt Lake Refining	Salt Lake City, UT	83-7-28-643
644	Phillips Petroleum Co.	Wood Crossing, UT	83-7-28-644

(continued)

TABLE 35 (Concluded)

NRC Sample ID No.	POSF No.	Supplier Identification	Lab Report No.	Sampling Date
614	None Assigned	84	DLA-600-0-82-0612	3/26/83 4/12/83
615	None Assigned	110, CC-83-18	DLA-600-82-D-0628	3/20/83 4/14/83
616	None Assigned	805, Batch SW0029 Sample 820023	82-F-2280	2/11/83
617	None Assigned	342, 83-94 83-51-006	DLA-600-81-D-0434	4/06/83
618	None Assigned	Tank #7 145, B-00733 DCN 8259	DLA-600-82-C-0282	5/11/82
619	83-POSF-1001			5/07/83
620	83-POSF-1019			5/19/83
621	83-POSF-0999			5/17/83
622	None Assigned			5/19/83
623	83-POSF-1021			5/17/83
624	None Assigned			5/18/83
625	None Assigned	7, 83-03		5/31/83
626	83-POSF-0997			5/17/83
627	None Assigned	409, AF-83-30	DLA-600-82-D-0629	5/31/83
628	None Assigned	411/350, 83-488	2866	5/16/83 6/01/83
629	None Assigned			6/01/83
630	None Assigned			6/06/83
631	83-POSF-1089			6/06/83
632	83-POSF-1091			6/06/83
633	83-POSF-1093			6/06/83
634	83-POSF-1095			6/06/83
635	83-POSF-1097			6/06/83
636	None Assigned	800X93, 85-15		5/16/83 6/07/83
637	None Assigned	Tank #1, Pipeline Tenn., CN 3081		6/02/83 6/08/83
638	None Assigned	77, AF-83-19	DLA-600-81-D-0455	4/12/83 6/13/83
639	None Assigned	602		6/06/83
640	83-POSF-0561	B-352, C-2-5		7/18/83
643	None Assigned	40073, 10-d-83	DLA-600-82-D-0621	5/20/83 7/28/83
644	None Assigned	132, 8585(11)-83	DLA-600-82-D-0638	5/24/83 7/28/83

\*This is the only JP-5 sample.

TABLE 36. FEATURE CONCENTRATION (mg/ml) VARIABILITY  
FOR 54 JP-4 PETROLEUM-DERIVED FUELS

STATISTICAL SUMMARY OF MH10 DATA BASE

CONSISTING OF 106 SAMPLES  
CONCENTRATION (mg/ml)

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	%REL STANDARD DEVIATION	NUMBER OF SAMPLES
KI= 377.21	FE=001	1.90E-01	3.30E-01	9.19E-02	4.8E-01	35
KI= 383.01	FE=002	4.73E-01	1.21E+00	3.26E-01	6.9E+01	63
8400-n-C4-ANEI	FE=003	1.45E+00	3.68E+00	9.99E-01	6.90E+01	92
KI= 457.61	FE=004	5.19E+00	1.36E+01	2.92E+00	5.63E+01	106
8500-n-C5-ANEI	FE=005	8.05E+00	1.68E+01	4.43E+00	5.51E+01	106
KI= 507.01	FE=006	3.49E-01	7.23E-01	3.53E-01	1.01E+02	6
KI= 511.21	FE=007	1.40E-01	4.11E-01	1.33E-01	9.51E+01	9
KI= 514.31	FE=008	2.96E-01	9.47E-01	3.43E-01	1.16E+02	12
KI= 520.11	FE=009	1.17E+00	4.61E+00	1.17E+00	9.97E+01	95
CH2CL2 SOLVENT		0.00E+00	0.00E+00	0.00E+00	1.70E+38	106
KI= 549.71	FE=010	1.62E+00	5.42E+00	1.03E+00	6.32E+01	106
KI= 552.41	FE=011	2.23E+00	5.53E+00	1.48E+00	6.66E+01	106
IMPURITY #1(KI= 558.4)		1.65E-01	1.43E-01	3.86E-02	2.36E+01	93
KI= 560.41	FE=012	1.31E+01	2.78E+01	7.60E+00	5.80E+01	106
KI= 577.31	FE=013	9.84E+00	2.49E+01	6.34E+00	6.44E+01	106
8600-n-C6-ANEI	FE=014	2.09E+01	5.12E+01	1.03E+01	4.92E+01	106
KI= 609.21	FE=015	2.33E-01	5.45E-01	1.84E-01	7.92E+01	14
KI= 611.21	FE=016	2.29E-01	6.27E-01	1.89E-01	8.26E+01	19
KI= 613.91	FE=017	4.27E-01	1.30E+00	3.44E-01	8.04E+01	28
KI= 624.81	FE=018	1.19E+01	3.43E+01	7.17E+00	6.02E+01	106
KI= 627.31	FE=019	2.77E-01	7.55E-01	2.07E-01	7.48E+01	27
KI= 632.41	FE=020	1.77E+00	4.45E+00	1.02E+00	5.76E+01	106
KI= 653.01	FE=021	8.20E-01	3.56E+00	7.72E-01	9.41E+01	106
KI= 656.11	FE=022	1.05E+01	3.07E+01	8.11E+00	7.75E+01	106
KI= 653.81	FE=023	4.10E+00	1.96E+01	4.10E+00	1.00E+02	106
KI= 669.01	FE=024	5.46E+00	1.20E+01	2.55E+00	4.66E+01	106
KI= 670.41	FE=025	1.10E+01	2.31E+01	5.53E+00	5.01E+01	106
IMPURITY #2(KI= 674.4)		6.84E-01	2.92E-01	4.57E-02	6.68E+00	106
KI= 677.41	FE=026	1.31E+01	2.83E+01	6.73E+00	5.14E+01	106
KI= 679.81	FE=027	3.92E+00	1.51E+01	2.84E+00	7.24E+01	106
KI= 682.01	FE=028	3.66E+00	1.36E+01	2.59E+00	7.08E+01	106
KI= 684.61	FE=029	6.48E+00	2.44E+01	4.69E+00	7.25E+01	106
KI= 685.81	FE=030	1.25E+00	2.73E+00	6.43E-01	5.14E+01	106
8700-n-C7-ANEI	FE=031	2.43E+01	6.64E+01	1.04E+01	4.26E+01	106
KI= 701.81	FE=032	2.02E-01	4.67E-01	1.66E-01	8.19E+01	12
KI= 705.01	FE=033	1.64E-01	3.19E-01	9.07E-02	5.52E+01	24
KI= 706.71	FE=034	1.67E-01	1.49E-01	5.20E-02	3.12E+01	10
KI= 708.01	FE=035	2.10E-01	5.62E-01	1.58E-01	7.53E+01	20
KI= 712.51	FE=036	2.48E+01	6.37E+01	1.60E+01	6.44E+01	106
KI= 715.61	FE=037	1.96E+00	6.99E+00	1.37E+00	7.00E+01	106
KI= 719.11	FE=038	5.05E-01	1.66E+00	3.57E-01	7.06E+01	106
KI= 725.81	FE=039	2.26E+00	4.76E+00	1.23E+00	5.43E+01	106
KI= 730.01	FE=040	1.39E+00	2.10E+00	4.83E-01	3.47E+01	106
KI= 731.01	FE=041	1.95E+00	3.69E+00	8.09E-01	4.14E+01	101
KI= 733.61	FE=042	2.35E+00	7.20E+00	1.61E+00	6.84E+01	106
KI= 735.01	FE=043	5.91E-01	1.45E+00	3.42E-01	5.78E+01	105
KI= 741.21	FE=044	2.88E+00	1.24E+01	2.44E+00	8.46E+01	104
KI= 743.31	FE=045	3.13E-01	1.01E+00	2.30E-01	7.35E+01	95
KI= 745.41	FE=046	2.08E-01	7.75E-01	1.86E-01	8.94E+01	68
KI= 749.91	FE=047	2.30E-01	2.85E-01	1.35E-01	5.86E+01	6
KI= 753.91	FE=048	7.58E-01	2.64E+00	4.86E-01	6.41E+01	104
KI= 757.11	FE=049	2.15E+00	4.07E+00	8.34E-01	3.88E+01	106
KI= 758.81	FE=050	1.38E+01	3.15E+01	8.29E+00	6.00E+01	106

TABLE 36 (continued)

KI= 762.01	FE=051	2.11E-01	5.35E-01	1.44E-01	6.82E+01	25
KI= 765.31	FE=052	1.11E+01	1.88E+01	3.99E+00	3.58E+01	106
KI= 766.41	FE=053	3.39E+00	8.22E+00	1.44E+00	4.25E+01	105
KI= 768.81	FE=054	6.19E+00	1.84E+01	4.19E+00	6.77E+01	106
KI= 770.61	FE=055	3.49E+00	1.08E+01	2.28E+00	6.52E+01	105
KI= 772.41	FE=056	8.45E+00	3.10E+01	4.87E+00	5.76E+01	106
KI= 775.21	FE=057	1.20E+00	3.55E+00	7.59E-01	6.31E+01	101
KI= 781.01	FE=058	1.17E+00	2.62E+00	6.47E-01	5.55E+01	104
KI= 783.21	FE=059	9.84E-01	2.71E+00	6.59E-01	6.70E+01	104
KI= 784.41	FE=060	2.10E+00	6.11E+00	1.50E+00	7.12E+01	104
KI= 785.41	FE=061	1.91E+01	2.83E-01	7.55E-02	3.95E+01	28
KI= 786.91	FE=062	3.47E+00	1.05E+01	2.33E+00	6.71E+01	106
KI= 791.11	FE=063	1.81E-01	1.27E-01	4.44E-02	2.45E+01	9
KI= 794.41	FE=064	8.15E-01	3.39E+00	7.46E-01	9.15E+01	97
KI= 795.71	FE=065	1.84E+00	5.13E+00	1.18E+00	6.44E+01	104
8800-n-C8-ANE1	FE=066	1.95E+01	4.53E+01	8.93E+00	4.58E+01	106
KI= 802.51	FE=067	3.23E-01	9.40E-01	2.33E-01	7.22E+01	71
KI= 805.71	FE=068	1.79E-01	2.82E-01	7.26E-02	4.05E+01	27
KI= 807.11	FE=069	2.75E-01	9.34E-01	1.67E-01	6.07E+01	93
KI= 808.91	FE=070	1.91E-01	2.36E-01	1.08E-01	5.68E+01	6
KI= 812.31	FE=071	2.82E-01	1.93E+00	2.69E-01	9.55E+01	97
KI= 813.61	FE=072	3.56E-01	1.31E+00	2.52E-01	7.07E+01	97
KI= 817.01	FE=073	5.52E-01	2.89E+00	4.98E-01	9.02E+01	70
KI= 818.21	FE=074	1.18E+00	3.72E+00	7.61E-01	6.44E+01	98
KI= 821.31	FE=075	1.27E+00	7.79E+00	1.07E+00	8.43E+01	104
KI= 824.21	FE=076	5.82E+00	1.38E+01	3.55E+00	6.10E+01	106
KI= 825.71	FE=077	1.27E+00	2.87E+00	7.57E-01	5.97E+01	100
KI= 829.11	FE=078	8.22E+00	2.21E+01	5.15E+00	6.27E+01	106
KI= 834.41	FE=079	4.06E+00	2.26E+01	3.07E+00	7.57E+01	106
KI= 837.01	FE=080	3.86E-01	9.79E-01	2.49E-01	6.46E+01	98
KI= 840.81	FE=081	4.23E-01	1.62E+00	3.45E-01	8.17E+01	98
KI= 842.71	FE=082	2.79E+00	9.69E+00	1.99E+00	7.12E+01	106
KI= 844.21	FE=083	4.29E-01	2.09E+00	3.01E-01	7.01E+01	100
KI= 846.21	FE=084	2.39E-01	8.45E-01	1.81E-01	7.56E+01	91
KI= 848.21	FE=085	1.83E-01	3.02E-01	7.81E-02	4.26E+01	62
KI= 850.91	FE=086	1.41E-01	2.45E-01	5.89E-02	4.18E+01	39
KI= 852.81	FE=087	1.89E-01	5.93E-01	1.53E-01	8.08E+01	24
KI= 854.41	FE=088	6.07E+00	1.72E+01	3.47E+00	5.72E+01	106
KI= 856.11	FE=089	1.56E+00	4.22E+00	8.77E-01	5.63E+01	106
KI= 860.01	FE=090	6.59E-01	4.23E+00	5.83E-01	8.85E+01	102
KI= 862.21	FE=091	1.39E+01	4.67E+01	9.15E+00	6.60E+01	104
KI= 863.81	FE=092	5.17E+00	8.58E+01	1.33E+01	2.58E+02	74
KI= 865.01	FE=093	4.78E+00	2.06E+01	3.07E+00	6.42E+01	106
KI= 867.41	FE=094	5.36E-01	1.67E+00	3.47E-01	6.49E+01	72
KI= 869.51	FE=095	9.18E-01	5.47E+00	7.84E-01	8.54E+01	94
KI= 871.21	FE=096	5.74E+00	2.41E+01	3.57E+00	6.22E+01	106
KI= 873.11	FE=097	4.40E-01	1.20E+00	2.62E-01	5.95E+01	92
KI= 877.11	FE=098	5.13E-01	1.62E+00	3.50E-01	6.82E+01	106
KI= 880.01	FE=099	4.01E+00	8.08E+00	2.36E+00	5.88E+01	106
KI= 881.61	FE=100	1.54E+00	3.16E+00	8.96E-01	5.82E+01	106
KI= 884.51	FE=102	5.03E+00	1.96E+01	3.15E+00	6.27E+01	106
KI= 887.41	FE=103	4.52E-01	1.05E+00	2.62E-01	5.80E+01	97
KI= 890.91	FE=104	3.72E-01	1.23E+00	2.71E-01	7.27E+01	95
KI= 892.61	FE=105	2.82E-01	8.05E-01	1.79E-01	6.35E+01	83
KI= 894.61	FE=106	6.36E-01	2.13E+00	5.06E-01	7.95E+01	106
KI= 895.91	FE=107	4.46E-01	1.37E+00	3.14E-01	7.05E+01	104
KI= 897.61	FE=108	1.13E+00	2.42E+00	7.17E-01	6.33E+01	106
8900-n-C9-ANE1	FE=109	1.68E+01	3.48E+01	8.74E+00	5.21E+01	106
KI= 901.31	FE=110	2.38E-01	4.57E-01	1.50E-01	6.31E+01	47
KI= 908.41	FE=112	1.90E+00	5.65E+00	1.40E+00	7.38E+01	106
KI= 910.81	FE=113	9.86E-01	2.50E+00	6.48E-01	6.57E+01	106

TABLE 36 (continued)

KI= 913.91	FE=114	5.84E-01	1.47E+00	3.82E-01	6.54E+01	106
KI= 915.41	FE=115	4.85E-01	1.34E+00	3.49E-01	7.19E+01	105
KI= 917.71	FE=116	1.53E+00	4.49E+00	9.07E-01	5.73E+01	106
KI= 920.11	FE=117	7.62E-01	2.16E+00	5.29E-01	6.95E+01	106
KI= 922.61	FE=118	2.78E+00	6.47E+00	1.67E+00	6.02E+01	106
KI= 924.71	FE=119	1.09E+00	3.30E+00	6.85E-01	6.30E+01	106
KI= 929.11	FE=120	2.22E+00	4.44E+00	1.16E+00	5.22E+01	105
KI= 933.51	FE=122	5.23E+00	1.03E+01	2.80E+00	5.35E+01	106
KI= 939.41	FE=123	2.95E+00	8.67E+00	2.00E+00	6.79E+01	106
KI= 941.01	FE=124	5.92E-01	9.59E-01	2.81E-01	4.75E+01	61
KI= 945.31	FE=125	1.96E+00	4.14E+00	1.08E+00	5.54E+01	106
KI= 947.41	FE=126	1.46E+00	3.26E+00	6.01E-01	4.67E+01	106
KI= 952.01	FE=127	9.42E-01	2.39E+00	5.30E-01	5.62E+01	106
KI= 953.51	FE=128	1.43E+00	4.07E+00	8.38E-01	5.87E+01	106
KI= 955.81	FE=129	4.99E+00	8.78E+00	2.06E+00	4.14E+01	105
KI= 956.81	FE=130	1.70E+00	8.19E+00	1.13E+00	6.67E+01	70
KI= 960.51	FE=131	9.77E-01	2.30E+00	5.13E-01	5.25E+01	99
KI= 962.11	FE=132	5.29E+00	1.08E+01	2.40E+00	4.54E+01	106
KI= 964.71	FE=133	3.01E+00	7.35E+00	1.61E+00	5.35E+01	106
KI= 966.11	FE=134	7.14E-01	8.87E-01	2.78E-01	3.89E+01	23
KI= 967.41	FE=135	1.67E+00	3.40E+00	8.62E-01	5.16E+01	106
KI= 970.81	FE=136	2.32E+00	5.64E+00	1.22E+00	5.26E+01	106
KI= 972.71	FE=137	1.72E+00	5.34E+00	9.32E-01	5.43E+01	106
KI= 974.91	FE=138	1.90E-01	3.98E-01	8.84E-02	4.66E+01	85
KI= 976.91	FE=139	1.68E+00	4.27E+00	8.87E-01	5.28E+01	106
KI= 979.21	FE=140	1.32E+00	3.96E+00	7.80E-01	5.93E+01	103
KI= 980.21	FE=141	7.10E-01	1.47E+00	3.43E-01	4.83E+01	71
KI= 981.71	FE=142	7.13E-01	1.55E+00	3.16E-01	4.43E+01	102
KI= 983.31	FE=143	3.54E-01	6.58E-01	1.67E-01	4.72E+01	100
KI= 986.21	FE=144	6.55E+00	1.12E+01	2.98E+00	4.55E+01	106
KI= 989.01	FE=145	9.41E-01	2.67E+00	5.03E-01	5.34E+01	106
KI= 993.51	FE=146	1.07E+00	2.73E+00	6.00E-01	5.61E+01	104
KI= 995.31	FE=147	3.73E-01	8.86E-01	2.03E-01	5.43E+01	97
KI= 996.81	FE=148	3.00E-01	6.51E-01	1.35E-01	4.51E+01	84
91000-n-C10-ANE	FE=149	1.40E+01	2.51E+01	6.50E+00	4.44E+01	106
KI=1003.91	FE=150	7.91E-01	1.79E+00	3.51E-01	4.44E+01	106
KI=1009.01	FE=151	3.93E-01	1.15E+00	2.98E-01	7.57E+01	60
KI=1013.91	FE=152	3.61E+00	7.63E+00	1.61E+00	4.45E+01	106
KI=1017.01	FE=153	1.34E+00	3.10E+00	6.48E-01	4.83E+01	106
KI=1019.31	FE=154	6.58E-01	1.74E+00	4.03E-01	6.13E+01	69
KI=1020.11	FE=155	8.56E-01	2.80E+00	7.00E-01	8.18E+01	74
KI=1022.91	FE=156	3.37E+00	6.62E+00	1.45E+00	4.30E+01	106
KI=1025.81	FE=157	1.95E+00	3.70E+00	7.65E-01	3.93E+01	106
KI=1028.41	FE=158	1.42E+00	3.33E+00	6.77E-01	4.75E+01	104
KI=1031.61	FE=159	9.98E-01	1.76E+00	3.90E-01	3.90E+01	103
KI=1033.41	FE=160	5.73E-01	1.70E+00	3.50E-01	6.10E+01	96
KI=1034.61	FE=161	7.22E-01	1.79E+00	3.60E-01	4.99E+01	99
KI=1036.61	FE=162	3.77E-01	7.27E-01	1.80E-01	4.79E+01	102
KI=1039.51	FE=163	9.47E-01	2.53E+00	4.68E-01	4.95E+01	104
KI=1040.61	FE=164	2.28E-01	2.76E-01	7.78E-02	3.41E+01	63
KI=1043.21	FE=165	1.26E+00	2.44E+00	5.64E-01	4.48E+01	106
KI=1044.71	FE=166	5.01E-01	1.91E+00	3.99E-01	7.97E+01	94
KI=1046.41	FE=167	1.78E+00	3.48E+00	7.85E-01	4.41E+01	106
KI=1049.41	FE=168	6.17E-01	1.27E+00	2.90E-01	4.71E+01	74
KI=1050.61	FE=169	1.24E+00	4.54E+00	8.51E-01	6.88E+01	104
KI=1053.81	FE=170	1.36E+00	3.59E+00	7.38E-01	5.44E+01	106
KI=1055.31	FE=171	3.44E-01	1.26E+00	2.50E-01	7.26E+01	75
KI=1057.91	FE=173	1.37E+00	3.81E+00	6.78E-01	4.94E+01	106
KI=1060.81	FE=174	1.89E+00	6.61E+00	1.06E+00	5.58E+01	106
KI=1064.61	FE=175	2.23E+00	5.85E+00	1.07E+00	4.80E+01	106
KI=1066.21	FE=176	5.82E-01	1.04E+00	2.30E-01	3.95E+01	104

TABLE 36 (continued)

KI=1070.6:	FE=177	2.65E+00	8.21E+00	1.44E+00	5.44E+01	103
KI=1072.8:	FE=178	1.43E+00	3.95E+00	7.33E-01	5.13E+01	106
KI=1079.0:	FE=179	2.39E+00	4.88E+00	1.17E+00	4.91E+01	106
KI=1081.6:	FE=180	7.44E-01	2.03E+00	3.62E-01	4.86E+01	104
KI=1084.3:	FE=181	6.67E-01	1.85E+00	3.90E-01	4.50E+01	102
KI=1087.2:	FE=182	5.45E-01	1.25E+00	2.74E-01	5.04E+01	104
KI=1089.4:	FE=183	3.97E-01	8.65E-01	1.78E-01	4.48E+01	98
KI=1090.8:	FE=184	4.14E-01	8.57E-01	1.87E-01	4.53E+01	95
KI=1093.8:	FE=185	2.49E-01	4.99E-01	1.18E-01	4.73E+01	80
KI=1096.0:	FE=186	8.24E-01	1.86E+00	3.86E-01	4.68E+01	106
§1100-n-C11-ANE:	FE=187	1.29E+01	2.85E+01	6.63E+00	5.15E+01	106
KI=1101.7:	FE=188	2.06E-01	5.47E-01	1.12E-01	5.42E+01	41
KI=1104.4:	FE=189	4.33E-01	1.11E+00	2.25E-01	5.20E+01	100
KI=1106.6:	FE=190	1.88E-01	1.97E-01	6.38E-02	3.40E+01	17
KI=1108.4:	FE=191	7.06E-01	3.53E+00	6.53E-01	9.25E+01	100
KI=1110.3:	FE=192	3.42E-01	4.54E-01	1.10E-01	3.23E+01	43
KI=1112.6:	FE=193	1.46E+00	5.21E+00	1.12E+00	7.53E+01	104
KI=1115.8:	FE=194	1.21E+00	2.90E+00	7.45E-01	6.16E+01	94
KI=1117.7:	FE=195	7.54E-01	2.19E+00	4.77E-01	6.33E+01	101
KI=1119.7:	FE=196	2.10E-01	5.27E-01	1.11E-01	5.30E+01	60
KI=1123.4:	FE=198	3.18E-01	8.68E-01	2.03E-01	6.38E+01	97
KI=1127.0:	FE=199	9.86E-01	2.17E+00	4.99E-01	5.06E+01	104
KI=1129.4:	FE=200	1.29E+00	2.97E+00	6.87E-01	5.34E+01	105
KI=1132.7:	FE=201	5.44E-01	1.31E+00	3.32E-01	6.10E+01	43
KI=1133.7:	FE=202	5.26E-01	9.94E-01	2.65E-01	5.03E+01	19
KI=1135.0:	FE=203	4.53E-01	1.18E+00	2.70E-01	5.96E+01	83
KI=1137.1:	FE=204	2.93E-01	7.86E-01	1.57E-01	5.37E+01	69
KI=1139.7:	FE=205	8.99E-01	4.37E+00	7.59E-01	8.44E+01	81
KI=1141.0:	FE=206	3.84E-01	4.06E+00	9.20E-01	1.04E+02	91
KI=1144.0:	FE=207	1.29E+00	7.46E+00	1.09E+00	8.39E+01	104
KI=1143.3:	FE=208	5.92E-01	1.49E+00	3.07E-01	5.18E+01	101
KI=1149.8:	FE=209	3.10E-01	6.30E-01	1.43E-01	4.61E+01	73
KI=1152.6:	FE=210	1.18E+00	3.39E+00	7.81E-01	6.64E+01	103
KI=1155.0:	FE=211	6.47E-01	1.40E+00	3.34E-01	5.17E+01	67
KI=1156.1:	FE=212	1.17E+00	4.11E+00	8.67E-01	7.43E+01	101
KI=1158.0:	FE=213	2.40E-01	6.97E-01	1.69E-01	7.04E+01	62
KI=1159.8:	FE=214	1.01E+00	2.91E+00	6.68E-01	6.58E+01	102
KI=1161.8:	FE=215	3.54E-01	9.83E-01	2.14E-01	6.05E+01	79
KI=1164.2:	FE=216	1.94E+00	4.87E+00	1.16E+00	5.98E+01	102
KI=1170.4:	FE=217	2.20E+00	6.46E+00	1.21E+00	5.48E+01	90
KI=1171.4:	FE=218	1.49E+00	6.45E+00	1.37E+00	9.18E+01	37
KI=1175.9:	FE=219	3.40E-01	9.64E-01	2.40E-01	7.06E+01	84
KI=1179.7:	FE=220	5.31E-01	1.42E+00	2.91E-01	5.47E+01	85
KI=1181.4:	FE=221	5.59E-01	1.48E+00	3.14E-01	5.61E+01	99
KI=1185.3:	FE=222	1.04E+00	3.29E+00	7.91E-01	7.64E+01	98
KI=1189.6:	FE=223	6.33E-01	1.82E+00	4.45E-01	7.03E+01	89
KI=1191.5:	FE=224	4.74E-01	1.11E+00	2.92E-01	6.15E+01	82
KI=1193.9:	FE=225	5.84E-01	1.84E+00	4.40E-01	7.54E+01	81
KI=1195.4:	FE=226	3.66E-01	3.15E-01	1.01E-01	2.76E+01	11
§1200-n-C12-ANE:	FE=227	8.92E+00	2.27E+01	5.15E+00	5.78E+01	104
KI=1203.4:	FE=228	3.96E-01	8.29E-01	2.04E-01	5.16E+01	79
KI=1205.6:	FE=229	5.05E-01	1.36E+00	2.73E-01	5.41E+01	83
KI=1207.2:	FE=230	2.10E-01	2.68E-01	1.21E-01	5.76E+01	7
KI=1210.9:	FE=231	5.25E-01	1.31E+00	3.08E-01	5.86E+01	94
KI=1214.2:	FE=232	3.03E+00	6.73E+00	1.56E+00	5.12E+01	102
KI=1218.2:	FE=233	3.51E-01	9.55E-01	2.43E-01	6.92E+01	64
KI=1220.0:	FE=234	3.80E-01	4.73E-01	1.25E-01	3.29E+01	20
KI=1221.7:	FE=235	3.41E-01	9.53E-01	2.19E-01	6.42E+01	92
KI=1224.3:	FE=236	2.88E-01	7.49E-01	1.50E-01	5.20E+01	77
KI=1227.8:	FE=237	6.65E-01	1.49E+00	3.47E-01	5.21E+01	98
KI=1233.9:	FE=238	1.31E+00	3.22E+00	6.97E-01	5.34E+01	101

TABLE 36 (Concluded)

KI=1238.6:	FE=239	8.05E-01	1.95E+00	4.65E-01	5.78E+01	100
KI=1241.7:	FE=240	4.38E-01	9.85E-01	2.21E-01	5.05E+01	90
KI=1245.4:	FE=241	3.01E-01	7.90E-01	1.61E-01	5.33E+01	91
KI=1248.5:	FE=242	5.30E-01	1.09E+00	3.04E-01	5.74E+01	89
KI=1252.8:	FE=243	7.75E-01	1.84E+00	4.19E-01	5.40E+01	98
KI=1254.8:	FE=244	1.06E+00	3.12E+00	6.24E-01	5.87E+01	97
KI=1259.3:	FE=245	8.14E-01	2.24E+00	4.89E-01	6.01E+01	100
KI=1264.0:	FE=246	1.10E+00	2.72E+00	6.02E-01	5.46E+01	100
KI=1267.6:	FE=247	4.10E-01	1.05E+00	2.14E-01	5.22E+01	89
KI=1270.2:	FE=248	7.79E-01	1.88E+00	4.18E-01	5.37E+01	96
KI=1273.1:	FE=249	2.32E+00	4.58E+00	1.17E+00	3.03E+01	100
KI=1276.1:	FE=250	1.77E-01	1.96E-01	6.17E-02	3.49E+01	20
KI=1277.5:	FE=251	1.76E-01	7.94E-01	1.21E-01	6.88E+01	54
KI=1282.7:	FE=253	1.27E+00	3.48E+00	7.66E-01	6.05E+01	100
KI=1285.6:	FE=254	2.96E-01	1.20E+00	1.92E-01	6.48E+01	80
KI=1288.3:	FE=255	2.10E-01	8.62E-01	1.89E-01	9.03E+01	32
KI=1294.2:	FE=256	2.90E-01	1.62E+00	2.08E-01	7.18E+01	92
\$1300-n-C13-ANE:	FE=257	7.16E+00	1.77E+01	4.15E+00	5.80E+01	102
KI=1304.4:	FE=258	2.50E-01	7.39E-01	1.49E-01	5.96E+01	30
KI=1309.6:	FE=259	6.01E-01	1.51E+00	3.18E-01	5.30E+01	82
KI=1311.5:	FE=260	4.37E-01	1.12E+00	2.58E-01	5.90E+01	76
KI=1318.0:	FE=262	8.91E-01	3.18E+00	6.76E-01	7.59E+01	97
KI=1323.1:	FE=263	3.77E-01	6.90E-01	1.68E-01	4.46E+01	47
KI=1328.0:	FE=264	4.63E-01	9.66E-01	2.36E-01	5.10E+01	74
KI=1333.4:	FE=265	3.51E-01	8.20E-01	1.92E-01	5.47E+01	87
KI=1338.4:	FE=266	5.33E-01	1.93E+00	3.48E-01	6.52E+01	91
KI=1342.2:	FE=267	2.66E-01	7.88E-01	1.62E-01	6.11E+01	67
KI=1344.5:	FE=268	1.62E-01	2.86E-01	8.22E-02	5.06E+01	19
KI=1347.5:	FE=269	2.00E-01	4.12E-01	1.06E-01	5.29E+01	44
KI=1351.1:	FE=270	5.45E-01	1.25E+00	3.17E-01	5.81E+01	95
KI=1354.0:	FE=271	2.92E-01	6.26E-01	1.35E-01	4.63E+01	83
KI=1358.9:	FE=272	4.87E-01	1.15E+00	2.71E-01	5.56E+01	93
KI=1364.0:	FE=273	7.83E-01	1.74E+00	4.44E-01	5.67E+01	95
KI=1370.3:	FE=274	4.63E-01	9.67E-01	2.40E-01	5.19E+01	93
KI=1376.7:	FE=275	1.27E+00	3.14E+00	7.17E-01	5.66E+01	98
KI=1383.0:	FE=276	3.37E-01	8.85E-01	2.00E-01	5.93E+01	86
KI=1388.6:	FE=277	2.60E-01	4.94E-01	1.09E-01	4.21E+01	75
KI=1393.4:	FE=278	7.82E-01	1.48E+00	3.93E-01	5.03E+01	91
\$1400-n-C14-ANE:	FE=279	3.74E+00	8.34E+00	2.24E+00	5.98E+01	100
KI=1404.0:	FE=280	2.63E-01	4.76E-01	1.11E-01	4.24E+01	72
KI=1407.9:	FE=281	4.90E-01	8.54E-01	2.59E-01	5.27E+01	87
KI=1411.1:	FE=282	5.34E-01	9.97E-01	2.59E-01	4.85E+01	84
KI=1413.6:	FE=283	3.17E-01	1.17E+00	3.28E-01	1.03E+02	49
KI=1422.0:	FE=285	1.22E-01	1.16E-01	3.05E-02	2.49E+01	24
KI=1427.2:	FE=286	2.62E-01	5.71E-01	1.23E-01	4.69E+01	75
KI=1430.3:	FE=287	1.45E-01	2.35E-01	5.39E-02	3.72E+01	43
KI=1434.1:	FE=288	1.67E-01	2.13E-01	5.58E-02	3.35E+01	29
KI=1443.2:	FE=289	2.75E-01	7.19E-01	1.43E-01	5.20E+01	73
KI=1446.1:	FE=290	1.56E-01	2.15E-01	6.35E-02	4.07E+01	51
KI=1450.5:	FE=291	3.13E-01	6.58E-01	1.74E-01	5.58E+01	39
KI=1453.4:	FE=292	2.03E-01	2.92E-01	7.91E-02	3.89E+01	68
KI=1458.7:	FE=293	2.84E-01	4.09E-01	1.22E-01	4.29E+01	72
KI=1462.7:	FE=294	1.13E+00	2.28E+00	6.56E-01	5.90E+01	88
KI=1470.7:	FE=295	3.22E-01	5.50E-01	1.56E-01	4.86E+01	69
\$1500-n-C15-ANE:	FE=296	1.69E+00	3.71E+00	1.17E+00	6.93E+01	95
\$1600-n-C16-ANE:	FE=297	6.42E-01	1.38E+00	3.91E-01	6.09E+01	76
&ANTH-d10(1S)(KI=1772)		1.00E+01	3.81E-06	9.49E-07	9.49E-06	106
\$2118-(IMPURITY #3)		9.55E-01	9.37E-01	1.79E-01	1.87E+01	100
TOTAL CONCENTRATION		6.01E+02	3.10E+02	7.02E+01	1.17E+01	106



TABLE 37. FEATURE CONCENTRATION (% Rel.) VARIABILITY  
FOR 54 JP-4 PETROLEUM-DERIVED FUELS

STATISTICAL SUMMARY OF MH09 DATA BASE

CONSISTING OF 106 SAMPLES  
CONCENTRATION (% REL.)

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	XREL STANDARD DEVIATION	NUMBER OF SAMPLES
KI= 377.21	FE=001	1.76E+02	3.01E+02	8.39E+01	4.76E+01	34
KI= 388.01	FE=002	1.26E+02	3.21E+02	8.65E+01	6.88E+01	62
8400-n-C4-ANEI	FE=003	1.20E+02	3.06E+02	8.30E+01	6.90E+01	92
KI= 457.61	FE=004	9.78E+01	2.56E+02	5.51E+01	5.63E+01	106
8500-n-C5-ANEI	FE=005	9.98E+01	2.09E+02	5.50E+01	5.51E+01	106
KI= 507.01	FE=006	2.89E+02	6.00E+02	2.93E+02	1.01E+02	6
KI= 511.21	FE=007	1.03E+02	3.01E+02	9.76E+01	9.51E+01	9
KI= 514.31	FE=008	2.35E+02	7.53E+02	2.72E+02	1.16E+02	12
KI= 520.11	FE=009	1.68E+02	6.62E+02	1.67E+02	9.97E+01	95
CH2CL2 SOLVENT		0.00E+00	0.00E+00	0.00E+00	1.70E+38	106
KI= 549.71	FE=010	1.26E+02	4.19E+02	7.95E+01	6.32E+01	104
KI= 552.41	FE=011	1.43E+02	3.56E+02	9.53E+01	6.66E+01	106
IMPURITY #1(KI= 558.61)		1.11E+02	9.62E+01	2.61E+01	2.36E+01	93
KI= 560.41	FE=012	1.41E+02	3.00E+02	8.19E+01	5.80E+01	106
KI= 577.31	FE=013	1.53E+02	3.86E+02	9.84E+01	6.44E+01	106
8600-n-C6-ANEI	FE=014	1.33E+02	3.25E+02	6.52E+01	4.92E+01	106
KI= 609.21	FE=015	2.41E+02	5.63E+02	1.91E+02	7.92E+01	14
KI= 611.21	FE=016	2.12E+02	5.82E+02	1.75E+02	8.26E+01	19
KI= 613.91	FE=017	2.53E+02	7.72E+02	2.04E+02	8.04E+01	28
KI= 624.81	FE=018	1.42E+02	4.11E+02	8.55E+01	6.02E+01	106
KI= 627.31	FE=019	2.59E+02	7.06E+02	1.94E+02	7.48E+01	27
KI= 632.41	FE=020	1.09E+02	2.74E+02	6.26E+01	5.76E+01	106
KI= 653.01	FE=021	8.79E+01	3.82E+02	8.28E+01	9.41E+01	106
KI= 656.11	FE=022	1.32E+02	3.86E+02	1.02E+02	7.75E+01	106
KI= 658.81	FE=023	1.13E+02	5.37E+02	1.13E+02	1.00E+02	106
KI= 669.01	FE=024	1.18E+02	2.60E+02	5.50E+01	4.66E+01	106
KI= 670.41	FE=025	9.70E+01	2.03E+02	4.86E+01	5.01E+01	106
IMPURITY #2(KI= 674.41)		9.12E+01	3.89E+01	6.09E+00	6.68E+00	106
KI= 677.41	FE=026	9.56E+01	2.06E+02	4.91E+01	5.14E+01	106
KI= 679.81	FE=027	1.61E+02	6.17E+02	1.16E+02	7.24E+01	106
KI= 682.01	FE=028	1.56E+02	5.80E+02	1.11E+02	7.08E+01	106
KI= 684.61	FE=029	1.53E+02	5.76E+02	1.11E+02	7.25E+01	106
KI= 685.81	FE=030	9.47E+01	2.06E+02	4.86E+01	5.14E+01	106
8700-n-C7-ANEI	FE=031	9.72E+01	2.65E+02	4.15E+01	4.26E+01	106
KI= 701.81	FE=032	1.45E+02	3.35E+02	1.19E+02	8.19E+01	12
KI= 705.01	FE=033	1.58E+02	3.07E+02	6.73E+01	5.52E+01	24
KI= 706.71	FE=034	1.89E+02	1.60E+02	5.88E+01	3.12E+01	10
KI= 708.01	FE=035	1.28E+02	3.42E+02	9.65E+01	7.53E+01	20
KI= 712.51	FE=036	1.57E+02	4.03E+02	1.01E+02	6.44E+01	106
KI= 715.61	FE=037	1.37E+02	4.89E+02	9.66E+01	7.00E+01	106
KI= 719.11	FE=038	4.87E+01	1.60E+02	3.45E+01	7.08E+01	106
KI= 725.81	FE=039	1.41E+02	2.96E+02	7.64E+01	5.43E+01	106
KI= 730.01	FE=040	5.85E+01	8.83E+01	2.03E+01	3.47E+01	106
KI= 731.01	FE=041	4.84E+01	9.14E+01	2.01E+01	4.14E+01	101
KI= 733.61	FE=042	1.47E+02	4.49E+02	1.01E+02	6.86E+01	106
KI= 735.01	FE=043	4.08E+01	1.00E+02	2.36E+01	5.78E+01	105
KI= 741.21	FE=044	1.87E+02	8.05E+02	1.58E+02	8.46E+01	104
KI= 743.31	FE=045	6.37E+01	2.06E+02	4.68E+01	7.35E+01	95
KI= 745.41	FE=046	4.78E+01	1.78E+02	4.28E+01	8.94E+01	68
KI= 749.91	FE=047	1.74E+02	2.16E+02	1.02E+02	5.86E+01	6
KI= 753.91	FE=048	1.28E+02	4.45E+02	8.20E+01	6.41E+01	104
KI= 757.11	FE=049	5.05E+01	9.56E+01	1.96E+01	3.88E+01	106
KI= 758.81	FE=050	1.63E+02	3.72E+02	9.80E+01	6.00E+01	106

TABLE 37 (continued)

KI= 742.01	FE=051	7.13E+01	1.81E+02	4.84E+01	6.82E+01	25
KI= 743.31	FE=052	6.27E+01	1.04E+02	2.24E+01	3.58E+01	104
KI= 744.41	FE=053	4.87E+01	1.18E+02	2.07E+01	4.23E+01	105
KI= 748.81	FE=054	1.34E+02	4.02E+02	9.05E+01	6.77E+01	104
KI= 770.41	FE=055	1.40E+02	4.33E+02	9.11E+01	6.52E+01	105
KI= 772.41	FE=056	4.19E+01	1.53E+02	2.41E+01	5.74E+01	104
KI= 773.21	FE=057	1.43E+02	4.24E+02	9.11E+01	6.31E+01	101
KI= 781.01	FE=058	1.04E+02	2.33E+02	5.75E+01	5.55E+01	104
KI= 783.21	FE=059	1.44E+02	3.94E+02	9.63E+01	6.70E+01	104
KI= 784.41	FE=060	1.64E+02	4.83E+02	1.10E+02	7.12E+01	104
KI= 785.41	FE=061	1.35E+02	2.00E+02	5.34E+01	3.93E+01	28
KI= 786.91	FE=062	1.37E+02	4.13E+02	9.20E+01	6.71E+01	104
KI= 791.11	FE=063	1.95E+02	1.37E+02	4.70E+01	2.45E+01	9
KI= 794.41	FE=064	1.32E+02	5.49E+02	1.21E+02	9.15E+01	97
KI= 795.71	FE=065	1.26E+02	3.53E+02	8.14E+01	6.44E+01	104
9500-n-C8-ANE1	FE=066	7.26E+01	1.69E+02	3.32E+01	4.58E+01	104
KI= 802.51	FE=067	3.34E+02	9.71E+02	2.41E+02	7.22E+01	71
KI= 805.71	FE=068	1.39E+02	2.19E+02	5.64E+01	4.05E+01	27
KI= 807.11	FE=069	1.14E+02	3.89E+02	6.94E+01	6.07E+01	93
KI= 808.91	FE=070	2.03E+02	2.52E+02	1.15E+02	5.69E+01	6
KI= 812.31	FE=071	5.00E+01	3.43E+02	4.77E+01	9.55E+01	97
KI= 813.61	FE=072	1.29E+02	4.77E+02	9.14E+01	7.07E+01	97
KI= 817.01	FE=073	6.11E+01	3.20E+02	5.51E+01	9.02E+01	70
KI= 818.21	FE=074	1.47E+02	4.62E+02	9.44E+01	6.44E+01	98
KI= 821.31	FE=075	5.75E+01	3.53E+02	4.84E+01	8.43E+01	104
KI= 824.21	FE=076	1.59E+02	3.78E+02	9.69E+01	6.10E+01	104
KI= 825.71	FE=077	1.30E+02	2.94E+02	7.76E+01	5.97E+01	100
KI= 828.11	FE=078	1.47E+02	3.93E+02	9.23E+01	6.27E+01	104
KI= 834.41	FE=079	6.47E+01	3.61E+02	4.90E+01	7.57E+01	104
KI= 837.01	FE=080	1.60E+02	4.05E+02	1.03E+02	6.46E+01	98
KI= 840.81	FE=081	1.97E+02	7.51E+02	1.61E+02	8.17E+01	98
KI= 842.71	FE=082	1.35E+02	4.80E+02	9.64E+01	7.12E+01	104
KI= 844.21	FE=083	7.23E+01	3.52E+02	5.07E+01	7.02E+01	100
KI= 846.21	FE=084	9.39E+01	3.32E+02	7.10E+01	7.54E+01	91
KI= 848.21	FE=085	1.40E+02	2.31E+02	5.97E+01	4.24E+01	62
KI= 850.91	FE=086	1.46E+02	2.55E+02	6.12E+01	4.18E+01	39
KI= 852.81	FE=087	1.09E+02	3.41E+02	8.78E+01	8.08E+01	24
KI= 854.41	FE=088	1.32E+02	3.76E+02	7.57E+01	5.72E+01	104
KI= 856.11	FE=089	8.88E+01	2.41E+02	5.00E+01	5.63E+01	104
KI= 860.01	FE=090	5.94E+01	3.63E+02	5.27E+01	8.85E+01	102
KI= 862.21	FE=091	1.68E+02	5.66E+02	1.11E+02	6.60E+01	104
KI= 863.81	FE=092	9.42E+01	1.56E+03	2.43E+02	2.58E+02	74
KI= 865.01	FE=093	7.47E+01	3.22E+02	4.79E+01	6.42E+01	104
KI= 867.41	FE=094	1.49E+02	4.65E+02	9.68E+01	6.49E+01	72
KI= 869.51	FE=095	6.30E+01	3.75E+02	5.38E+01	8.54E+01	94
KI= 871.21	FE=096	7.95E+01	3.34E+02	4.94E+01	6.22E+01	104
KI= 873.11	FE=097	1.19E+02	3.24E+02	7.07E+01	5.95E+01	92
KI= 877.11	FE=098	1.24E+02	3.91E+02	8.48E+01	6.82E+01	104
KI= 880.01	FE=099	1.39E+02	2.81E+02	8.19E+01	5.88E+01	104
KI= 881.61	FE=100	1.37E+02	2.81E+02	7.98E+01	5.82E+01	104
KI= 884.51	FE=102	1.39E+02	5.43E+02	8.73E+01	6.27E+01	104
KI= 887.41	FE=103	1.48E+02	3.45E+02	8.60E+01	5.80E+01	97
KI= 890.91	FE=104	1.38E+02	4.54E+02	1.00E+02	7.27E+01	95
KI= 892.61	FE=105	1.82E+02	5.18E+02	1.15E+02	6.35E+01	83
KI= 894.61	FE=106	1.49E+02	4.99E+02	1.19E+02	7.95E+01	104
KI= 895.91	FE=107	1.08E+02	3.28E+02	7.54E+01	7.01E+01	105
KI= 897.61	FE=108	1.37E+02	2.93E+02	8.68E+01	6.33E+01	104
8900-n-C9-ANE1	FE=109	1.04E+02	2.15E+02	5.41E+01	5.21E+01	104
KI= 901.31	FE=110	1.53E+02	2.94E+02	9.65E+01	6.31E+01	47
KI= 908.41	FE=112	1.63E+02	4.85E+02	1.20E+02	7.38E+01	104
KI= 910.81	FE=113	1.39E+02	3.53E+02	9.14E+01	6.57E+01	104

TABLE 37 (continued)

KI= 913.91	FE=114	1.47E+02	3.69E+02	9.61E+01	6.54E+01	104
KI= 915.41	FE=115	1.63E+02	4.52E+02	1.17E+02	7.19E+01	105
KI= 917.71	FE=116	9.69E+01	2.75E+02	5.56E+01	5.73E+01	104
KI= 920.11	FE=117	1.62E+02	4.60E+02	1.13E+02	6.95E+01	104
KI= 922.61	FE=118	1.29E+02	2.99E+02	7.74E+01	6.02E+01	104
KI= 924.71	FE=119	9.08E+01	2.76E+02	5.72E+01	6.30E+01	104
KI= 929.11	FE=120	1.26E+02	2.52E+02	6.97E+01	5.22E+01	105
KI= 933.51	FE=122	1.41E+02	2.79E+02	7.55E+01	5.35E+01	104
KI= 939.41	FE=123	1.18E+02	3.48E+02	8.01E+01	6.79E+01	104
KI= 941.01	FE=124	1.83E+02	2.96E+02	8.70E+01	4.75E+01	61
KI= 945.31	FE=125	1.47E+02	3.11E+02	8.12E+01	5.54E+01	104
KI= 947.41	FE=126	1.17E+02	2.62E+02	5.47E+01	4.67E+01	104
KI= 952.01	FE=127	1.13E+02	2.87E+02	6.37E+01	5.42E+01	104
KI= 953.51	FE=128	9.60E+01	2.74E+02	5.64E+01	5.87E+01	104
KI= 955.81	FE=129	1.19E+02	2.11E+02	4.93E+01	4.13E+01	104
KI= 956.81	FE=130	1.16E+02	5.62E+02	7.75E+01	6.67E+01	70
KI= 960.51	FE=131	1.07E+02	2.53E+02	5.63E+01	5.25E+01	99
KI= 962.11	FE=132	1.14E+02	2.33E+02	5.19E+01	4.54E+01	104
KI= 964.71	FE=133	1.20E+02	2.92E+02	6.39E+01	5.35E+01	104
KI= 966.11	FE=134	2.10E+02	2.63E+02	8.05E+01	3.83E+01	24
KI= 967.41	FE=135	1.31E+02	2.66E+02	6.74E+01	5.16E+01	104
KI= 970.81	FE=136	9.94E+01	2.42E+02	5.23E+01	5.26E+01	104
KI= 972.71	FE=137	1.10E+02	3.42E+02	5.96E+01	5.43E+01	104
KI= 974.91	FE=138	1.50E+02	3.14E+02	6.98E+01	4.66E+01	85
KI= 976.91	FE=139	1.13E+02	2.88E+02	5.99E+01	5.28E+01	104
KI= 979.21	FE=140	1.06E+02	3.20E+02	6.34E+01	6.00E+01	104
KI= 980.21	FE=141	2.00E+02	4.09E+02	9.52E+01	4.76E+01	70
KI= 981.71	FE=142	1.33E+02	2.89E+02	5.88E+01	4.43E+01	102
KI= 983.31	FE=143	1.58E+02	2.93E+02	7.44E+01	4.72E+01	100
KI= 986.21	FE=144	9.19E+01	1.57E+02	4.18E+01	4.55E+01	104
KI= 989.01	FE=145	1.13E+02	3.21E+02	6.05E+01	5.34E+01	104
KI= 993.51	FE=146	1.26E+02	3.22E+02	7.09E+01	5.61E+01	104
KI= 995.31	FE=147	1.55E+02	3.68E+02	8.43E+01	5.43E+01	97
KI= 996.81	FE=148	1.30E+02	2.83E+02	5.88E+01	4.51E+01	84
91000-n-C10-ANE	FE=149	1.08E+02	1.94E+02	5.01E+01	4.64E+01	104
KI=1003.91	FE=150	1.16E+02	2.62E+02	5.14E+01	4.44E+01	104
KI=1009.01	FE=151	2.18E+02	6.42E+02	1.65E+02	7.57E+01	60
KI=1013.91	FE=152	1.01E+02	2.14E+02	4.51E+01	4.45E+01	104
KI=1017.01	FE=153	1.02E+02	2.36E+02	4.94E+01	4.83E+01	104
KI=1019.31	FE=154	1.33E+02	3.51E+02	8.18E+01	6.16E+01	68
KI=1020.11	FE=155	9.08E+01	2.99E+02	7.43E+01	8.18E+01	75
KI=1022.91	FE=156	1.16E+02	2.27E+02	4.97E+01	4.30E+01	104
KI=1025.81	FE=157	9.26E+01	1.76E+02	3.64E+01	3.93E+01	104
KI=1028.41	FE=158	1.07E+02	2.50E+02	5.07E+01	4.75E+01	104
KI=1031.61	FE=159	1.26E+02	2.23E+02	4.92E+01	3.90E+01	103
KI=1033.41	FE=160	1.75E+02	5.19E+02	1.07E+02	6.10E+01	96
KI=1034.61	FE=161	1.09E+02	2.70E+02	5.43E+01	4.99E+01	99
KI=1036.61	FE=162	1.29E+02	2.48E+02	6.16E+01	4.79E+01	102
KI=1038.51	FE=163	1.29E+02	3.45E+02	6.40E+01	4.95E+01	104
KI=1040.61	FE=164	1.36E+02	1.65E+02	4.64E+01	3.41E+01	63
KI=1043.21	FE=165	9.82E+01	1.90E+02	4.40E+01	4.48E+01	104
KI=1044.71	FE=166	1.06E+02	4.05E+02	8.47E+01	7.97E+01	94
KI=1046.41	FE=167	8.75E+01	1.71E+02	3.84E+01	4.41E+01	104
KI=1049.41	FE=168	8.30E+01	1.70E+02	3.91E+01	4.71E+01	74
KI=1050.61	FE=169	1.04E+02	3.82E+02	7.16E+01	6.88E+01	104
KI=1053.81	FE=170	8.32E+01	2.20E+02	4.53E+01	5.44E+01	104
KI=1055.31	FE=171	1.04E+02	3.76E+02	7.47E+01	7.20E+01	74
KI=1057.91	FE=173	1.03E+02	2.85E+02	5.07E+01	4.94E+01	104
KI=1060.81	FE=174	8.94E+01	3.12E+02	4.99E+01	5.58E+01	104
KI=1064.61	FE=175	9.02E+01	2.37E+02	4.33E+01	4.80E+01	104
KI=1066.21	FE=176	9.59E+01	1.72E+02	3.79E+01	3.95E+01	104

TABLE 37 (continued)

KI=1070.61	FE=177	8.20E+01	2.54E+02	4.47E+01	5.44E+01	103
KI=1072.81	FE=178	7.89E+01	2.18E+02	4.05E+01	5.13E+01	106
KI=1079.01	FE=179	7.73E+01	1.58E+02	3.80E+01	4.91E+01	106
KI=1081.61	FE=180	8.98E+01	2.45E+02	4.37E+01	4.86E+01	104
KI=1084.31	FE=181	8.99E+01	1.91E+02	4.04E+01	4.50E+01	102
KI=1087.21	FE=182	9.18E+01	2.10E+02	4.62E+01	5.04E+01	104
KI=1089.41	FE=183	8.72E+01	1.90E+02	3.90E+01	4.48E+01	98
KI=1090.81	FE=184	8.16E+01	1.69E+02	3.69E+01	4.53E+01	95
KI=1093.81	FE=185	1.01E+02	2.02E+02	4.76E+01	4.73E+01	80
KI=1096.01	FE=186	8.98E+01	2.02E+02	4.20E+01	4.68E+01	106
01100-n-C11-ANE	FE=187	8.38E+01	1.85E+02	4.31E+01	5.15E+01	106
KI=1101.71	FE=188	1.07E+02	2.84E+02	5.81E+01	5.42E+01	41
KI=1104.41	FE=189	9.02E+01	2.30E+02	4.69E+01	5.20E+01	100
KI=1106.61	FE=190	1.74E+02	1.83E+02	5.93E+01	3.40E+01	17
KI=1108.41	FE=191	7.55E+01	3.77E+02	6.99E+01	9.23E+01	100
KI=1110.31	FE=192	1.30E+02	1.72E+02	4.19E+01	3.23E+01	43
KI=1112.61	FE=193	8.06E+01	2.83E+02	6.07E+01	7.53E+01	104
KI=1115.81	FE=194	7.35E+01	1.76E+02	4.53E+01	6.16E+01	94
KI=1117.71	FE=195	9.83E+01	2.86E+02	6.22E+01	6.33E+01	101
KI=1119.71	FE=196	1.73E+02	4.35E+02	9.19E+01	5.30E+01	60
KI=1123.41	FE=198	1.03E+02	2.82E+02	6.57E+01	6.38E+01	97
KI=1127.01	FE=199	8.87E+01	1.95E+02	4.49E+01	5.06E+01	104
KI=1129.41	FE=200	7.52E+01	1.73E+02	4.02E+01	5.34E+01	105
KI=1132.71	FE=201	1.60E+02	3.90E+02	9.78E+01	6.11E+01	44
KI=1133.71	FE=202	2.85E+02	5.28E+02	1.43E+02	5.00E+01	18
KI=1135.01	FE=203	1.17E+02	3.04E+02	6.96E+01	5.96E+01	83
KI=1137.11	FE=204	1.08E+02	2.89E+02	5.78E+01	5.37E+01	69
KI=1139.71	FE=205	8.48E+01	4.12E+02	7.16E+01	8.44E+01	81
KI=1141.01	FE=206	9.98E+01	4.58E+02	1.04E+02	1.04E+02	91
KI=1144.01	FE=207	8.37E+01	4.83E+02	7.02E+01	8.39E+01	104
KI=1148.31	FE=208	7.73E+01	1.94E+02	4.00E+01	5.18E+01	101
KI=1149.81	FE=209	9.20E+01	1.87E+02	4.24E+01	4.61E+01	73
KI=1152.61	FE=210	9.06E+01	2.61E+02	6.02E+01	6.44E+01	103
KI=1155.01	FE=211	9.23E+01	1.98E+02	4.69E+01	5.08E+01	66
KI=1156.11	FE=212	7.44E+01	2.63E+02	5.57E+01	7.48E+01	101
KI=1158.01	FE=213	1.17E+02	3.40E+02	8.23E+01	7.04E+01	62
KI=1159.81	FE=214	6.91E+01	1.93E+02	4.55E+01	6.58E+01	102
KI=1161.81	FE=215	9.31E+01	2.58E+02	5.63E+01	6.05E+01	79
KI=1164.21	FE=216	7.13E+01	1.79E+02	4.27E+01	5.98E+01	102
KI=1170.41	FE=217	8.35E+01	2.45E+02	4.69E+01	5.61E+01	87
KI=1171.41	FE=218	1.13E+02	4.78E+02	9.77E+01	8.64E+01	41
KI=1175.91	FE=219	7.81E+01	2.21E+02	5.51E+01	7.04E+01	84
KI=1179.71	FE=220	8.11E+01	2.16E+02	4.45E+01	5.48E+01	84
KI=1181.41	FE=221	6.57E+01	1.74E+02	3.69E+01	5.61E+01	99
KI=1185.31	FE=222	5.25E+01	1.67E+02	4.01E+01	7.64E+01	98
KI=1189.61	FE=223	6.44E+01	1.85E+02	4.53E+01	7.03E+01	89
KI=1191.51	FE=224	5.80E+01	1.36E+02	3.57E+01	6.15E+01	82
KI=1193.91	FE=225	5.83E+01	1.84E+02	4.40E+01	7.54E+01	81
KI=1195.41	FE=226	1.06E+02	9.11E+01	2.91E+01	2.76E+01	11
01200-n-C12-ANE	FE=227	7.06E+01	1.80E+02	4.08E+01	5.78E+01	104
KI=1203.41	FE=228	8.83E+01	1.85E+02	4.56E+01	5.16E+01	79
KI=1205.61	FE=229	1.45E+02	3.92E+02	7.87E+01	5.41E+01	83
KI=1207.21	FE=230	1.70E+02	2.17E+02	9.79E+01	5.76E+01	7
KI=1210.91	FE=231	7.61E+01	1.89E+02	4.46E+01	5.84E+01	94
KI=1214.21	FE=232	7.80E+01	1.72E+02	3.99E+01	5.12E+01	102
KI=1218.21	FE=233	9.69E+01	2.64E+02	6.70E+01	6.92E+01	64
KI=1220.01	FE=234	1.35E+02	1.68E+02	4.42E+01	3.29E+01	20
KI=1221.71	FE=235	1.00E+02	2.81E+02	6.44E+01	6.42E+01	92
KI=1224.31	FE=236	9.25E+01	2.41E+02	4.81E+01	5.20E+01	77
KI=1227.81	FE=237	6.95E+01	1.55E+02	3.62E+01	5.21E+01	98
KI=1233.91	FE=238	6.84E+01	1.69E+02	3.66E+01	5.34E+01	101

TABLE 37 (Concluded)

KI=1238.61	FE=239	6.82E+01	1.65E+02	3.94E+01	5.78E+01	100
KI=1241.71	FE=240	7.72E+01	1.73E+02	3.89E+01	5.05E+01	90
KI=1245.41	FE=241	6.89E+01	1.81E+02	3.67E+01	5.33E+01	91
KI=1249.51	FE=242	6.71E+01	1.38E+02	3.85E+01	5.74E+01	89
KI=1252.81	FE=243	6.92E+01	1.64E+02	3.74E+01	5.40E+01	98
KI=1254.81	FE=244	6.29E+01	1.84E+02	3.69E+01	5.87E+01	97
KI=1259.31	FE=245	6.25E+01	1.72E+02	3.76E+01	6.01E+01	100
KI=1264.01	FE=246	6.49E+01	1.60E+02	3.54E+01	5.44E+01	100
KI=1267.61	FE=247	6.81E+01	1.75E+02	3.55E+01	5.22E+01	89
KI=1270.21	FE=248	6.84E+01	1.65E+02	3.67E+01	5.37E+01	96
KI=1273.11	FE=249	6.74E+01	1.33E+02	3.39E+01	5.03E+01	100
KI=1276.11	FE=250	1.22E+02	1.35E+02	4.25E+01	3.49E+01	20
KI=1277.51	FE=251	1.00E+02	4.54E+02	6.92E+01	6.88E+01	54
KI=1282.71	FE=253	6.66E+01	1.83E+02	4.03E+01	6.05E+01	100
KI=1285.61	FE=254	8.87E+01	3.59E+02	5.74E+01	6.48E+01	80
KI=1289.31	FE=255	1.19E+02	4.90E+02	1.09E+02	9.03E+01	32
KI=1294.21	FE=256	7.22E+01	4.04E+02	5.18E+01	7.18E+01	92
81300-n-C13-ANE	FE=257	6.64E+01	1.64E+02	3.84E+01	5.80E+01	102
KI=1304.41	FE=258	1.07E+02	3.15E+02	6.36E+01	5.96E+01	30
KI=1309.61	FE=259	9.93E+01	2.50E+02	5.24E+01	5.30E+01	82
KI=1311.51	FE=260	8.28E+01	2.12E+02	4.89E+01	5.90E+01	74
KI=1318.01	FE=262	6.78E+01	2.42E+02	5.15E+01	7.59E+01	97
KI=1323.11	FE=263	9.92E+01	1.81E+02	4.42E+01	4.44E+01	47
KI=1328.01	FE=264	1.04E+02	2.17E+02	5.30E+01	5.10E+01	74
KI=1333.41	FE=265	8.84E+01	2.07E+02	4.84E+01	5.47E+01	87
KI=1338.41	FE=266	7.32E+01	1.85E+02	4.77E+01	6.52E+01	91
KI=1342.21	FE=267	1.18E+02	3.49E+02	7.20E+01	6.11E+01	67
KI=1344.51	FE=268	1.47E+02	2.58E+02	7.42E+01	5.04E+01	19
KI=1347.51	FE=269	1.34E+02	2.75E+02	7.09E+01	5.29E+01	44
KI=1351.11	FE=270	7.53E+01	1.73E+02	4.38E+01	5.81E+01	95
KI=1354.01	FE=271	7.72E+01	1.66E+02	3.57E+01	4.63E+01	83
KI=1358.91	FE=272	7.07E+01	1.67E+02	3.93E+01	5.54E+01	95
KI=1364.01	FE=273	6.54E+01	1.45E+02	3.71E+01	5.67E+01	95
KI=1370.31	FE=274	7.07E+01	1.48E+02	3.67E+01	5.19E+01	93
KI=1376.71	FE=275	7.13E+01	1.77E+02	4.03E+01	5.44E+01	98
KI=1383.01	FE=276	9.61E+01	2.53E+02	5.70E+01	5.93E+01	84
KI=1388.61	FE=277	9.34E+01	1.78E+02	3.94E+01	4.21E+01	75
KI=1393.41	FE=278	6.74E+01	1.28E+02	3.39E+01	5.03E+01	91
81400-n-C14-ANE	FE=279	7.18E+01	1.60E+02	4.30E+01	5.98E+01	100
KI=1404.01	FE=280	1.05E+02	1.89E+02	4.44E+01	4.24E+01	72
KI=1407.91	FE=281	6.32E+01	1.10E+02	3.33E+01	5.27E+01	87
KI=1411.11	FE=282	7.86E+01	1.47E+02	3.81E+01	4.85E+01	84
KI=1413.61	FE=283	2.70E+02	9.91E+02	2.78E+02	1.03E+02	49
KI=1422.01	FE=285	1.40E+02	1.32E+02	3.48E+01	2.49E+01	24
KI=1427.21	FE=286	8.42E+01	1.83E+02	3.95E+01	4.69E+01	75
KI=1430.31	FE=287	1.15E+02	1.86E+02	4.27E+01	3.72E+01	43
KI=1434.11	FE=288	1.65E+02	2.11E+02	5.53E+01	3.35E+01	29
KI=1443.21	FE=289	1.06E+02	2.75E+02	5.49E+01	5.20E+01	73
KI=1446.11	FE=290	1.28E+02	1.74E+02	5.21E+01	4.07E+01	51
KI=1450.51	FE=291	1.31E+02	2.76E+02	7.32E+01	5.58E+01	39
KI=1453.41	FE=292	1.12E+02	1.61E+02	4.37E+01	3.89E+01	68
KI=1458.71	FE=293	1.08E+02	1.55E+02	4.61E+01	4.29E+01	72
KI=1462.71	FE=294	9.33E+01	1.88E+02	5.41E+01	5.80E+01	88
KI=1470.71	FE=295	1.18E+02	2.02E+02	5.71E+01	4.84E+01	69
81500-n-C15-ANE	FE=296	1.14E+02	2.51E+02	7.92E+01	6.93E+01	95
81600-n-C16-ANE	FE=297	2.73E+02	5.88E+02	1.64E+02	6.09E+01	76
SANTH-d10(1S) (KI=1772)		1.00E+01	3.81E-06	1.05E-04	1.05E-05	106
82118-(IMPURITY #3)		1.09E+02	1.06E+02	2.04E+01	1.87E+01	100
TOTAL CONCENTRATION		2.56E+04	1.93E+04	4.68E+03	1.83E+01	106

TABLE 38. FEATURE KOVATS INDEX VARIABILITY FOR  
54 JP-4 PETROLEUM-DERIVED FUELS

STATISTICAL SUMMARY OF MH10 DATA BASE

CONSISTING OF 106 SAMPLES  
RETENTION INDEX (KI)

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	ZREL STANDARD DEVIATION	NUMBER OF SAMPLES
KI= 377.21	FE=001	377.34	3.62E+00	1.01E+00	2.68E-01	35
KI= 388.01	FE=002	387.76	3.63E+00	8.40E-01	2.17E-01	63
8400-n-C4-ANEI	FE=003	400.00	1.42E-02	1.48E-03	3.70E-04	92
KI= 457.61	FE=004	461.80	3.22E+01	1.07E+01	2.32E+00	106
8500-n-C5-ANEI	FE=005	500.00	1.30E-01	1.26E-02	2.53E-03	106
KI= 507.01	FE=006	507.00	2.27E-01	7.79E-02	1.54E-02	6
KI= 511.21	FE=007	510.92	1.05E+00	3.21E-01	6.29E-02	9
KI= 514.31	FE=008	514.09	9.95E-01	3.16E-01	6.14E-02	12
KI= 520.11	FE=009	519.93	1.66E+00	2.75E-01	5.29E-02	95
CH2CL2 SOLVENT		526.31	2.03E+00	4.94E-01	9.38E-02	106
KI= 549.71	FE=010	549.18	2.16E+00	4.02E-01	7.33E-02	104
KI= 552.41	FE=011	551.81	2.00E+00	4.43E-01	8.02E-02	106
IMPURITY #1(KI= 558.6)		558.09	2.29E+00	5.38E-01	9.64E-02	93
KI= 560.41	FE=012	560.00	2.46E+00	5.06E-01	9.03E-02	106
KI= 577.31	FE=013	576.94	1.76E+00	3.60E-01	6.24E-02	106
8600-n-C6-ANEI	FE=014	600.00	1.99E-02	1.93E-03	3.22E-04	106
KI= 609.21	FE=015	608.95	6.43E-01	2.20E-01	3.62E-02	14
KI= 611.21	FE=016	610.87	5.58E-01	1.77E-01	2.89E-02	19
KI= 613.91	FE=017	613.72	8.92E-01	2.22E-01	3.62E-02	28
KI= 624.81	FE=018	624.82	6.95E-01	1.54E-01	2.47E-02	106
KI= 627.31	FE=019	627.10	8.18E-01	1.93E-01	3.06E-02	27
KI= 632.41	FE=020	632.42	1.08E+00	1.92E-01	3.04E-02	106
KI= 653.01	FE=021	652.99	9.60E-01	2.07E-01	3.18E-02	106
KI= 656.11	FE=022	656.14	7.79E-01	1.91E-01	2.92E-02	106
KI= 659.81	FE=023	658.92	1.02E+00	2.17E-01	3.30E-02	106
KI= 669.01	FE=024	669.18	9.61E-01	1.89E-01	2.82E-02	106
KI= 670.41	FE=025	670.47	9.15E-01	1.84E-01	2.77E-02	106
IMPURITY #2(KI= 674.4)		674.54	8.45E-01	1.65E-01	2.45E-02	106
KI= 677.41	FE=026	677.56	8.49E-01	1.67E-01	2.46E-02	106
KI= 679.81	FE=027	679.93	7.69E-01	1.37E-01	2.01E-02	106
KI= 682.01	FE=028	682.16	7.75E-01	1.29E-01	1.90E-02	106
KI= 684.61	FE=029	684.74	6.91E-01	1.21E-01	1.77E-02	106
KI= 685.81	FE=030	685.92	7.39E-01	1.31E-01	1.90E-02	106
8700-n-C7-ANEI	FE=031	700.00	3.32E-02	3.23E-03	4.61E-04	106
KI= 701.81	FE=032	701.87	3.92E-01	1.22E-01	1.74E-02	12
KI= 705.01	FE=033	705.06	2.61E-01	7.04E-02	1.00E-02	24
KI= 706.71	FE=034	706.71	2.57E-01	7.94E-02	1.12E-02	10
KI= 708.01	FE=035	708.09	3.54E-01	9.54E-02	1.35E-02	20
KI= 712.51	FE=036	712.64	9.53E-01	1.81E-01	2.53E-02	106
KI= 715.61	FE=037	715.68	1.01E+00	1.65E-01	2.31E-02	106
KI= 719.11	FE=038	719.18	1.11E+00	1.81E-01	2.51E-02	106
KI= 725.81	FE=039	725.83	1.21E+00	1.95E-01	2.69E-02	106
KI= 730.01	FE=040	730.09	7.59E-01	1.28E-01	1.75E-02	106
KI= 731.01	FE=041	731.01	5.96E-01	1.16E-01	1.58E-02	101
KI= 733.61	FE=042	733.65	1.45E+00	1.78E-01	2.43E-02	106
KI= 735.01	FE=043	735.09	1.03E+00	1.67E-01	2.28E-02	105
KI= 741.21	FE=044	741.31	1.03E+00	1.81E-01	2.45E-02	104
KI= 743.31	FE=045	743.36	9.98E-01	1.86E-01	2.50E-02	95
KI= 745.41	FE=046	745.44	8.57E-01	1.70E-01	2.28E-02	68
KI= 749.91	FE=047	749.97	2.14E-01	9.16E-02	1.22E-02	6
KI= 753.91	FE=048	753.93	9.64E-01	1.79E-01	2.37E-02	104
KI= 757.11	FE=049	757.22	8.45E-01	1.58E-01	2.08E-02	106
KI= 758.81	FE=050	758.94	8.54E-01	1.68E-01	2.22E-02	106

TABLE 38 (continued)

KI= 762.01	FE=051	762.12	4.38E-01	1.32E-01	1.73E-02	25
KI= 765.31	FE=032	765.24	1.05E+00	1.24E-01	1.62E-02	106
KI= 766.41	FE=053	766.34	7.20E-01	1.23E-01	1.60E-02	105
KI= 768.81	FE=054	768.74	7.38E-01	1.34E-01	1.74E-02	106
KI= 770.61	FE=055	770.67	6.30E-01	1.41E-01	1.83E-02	105
KI= 772.41	FE=056	772.23	7.57E-01	1.61E-01	2.09E-02	106
KI= 775.21	FE=057	775.23	7.07E-01	1.43E-01	1.84E-02	101
KI= 781.01	FE=058	781.14	7.00E-01	1.54E-01	1.98E-02	104
KI= 783.21	FE=059	783.28	6.80E-01	1.54E-01	1.97E-02	104
KI= 784.41	FE=060	784.48	6.65E-01	1.53E-01	1.95E-02	104
KI= 785.41	FE=061	785.48	5.95E-01	1.47E-01	1.88E-02	28
KI= 786.91	FE=062	787.03	7.43E-01	1.54E-01	1.95E-02	106
KI= 791.11	FE=063	791.81	1.96E+00	8.89E-01	1.12E-01	9
KI= 794.41	FE=064	794.60	7.25E-01	1.64E-01	2.07E-02	97
KI= 795.71	FE=065	795.82	1.23E+00	1.92E-01	2.41E-02	104
8800-n-C6-ANE1	FE=066	800.00	1.60E-02	1.55E-03	1.94E-04	106
KI= 802.51	FE=067	801.86	1.49E+00	2.78E-01	3.47E-02	71
KI= 805.71	FE=068	805.52	8.09E-01	1.88E-01	2.33E-02	27
KI= 807.11	FE=069	807.21	7.51E-01	1.44E-01	1.78E-02	93
KI= 808.91	FE=070	808.91	7.95E-01	3.27E-01	4.04E-02	6
KI= 812.31	FE=071	812.45	6.28E-01	1.59E-01	1.96E-02	97
KI= 813.61	FE=072	813.69	7.50E-01	1.62E-01	2.00E-02	97
KI= 817.01	FE=073	817.19	6.44E-01	1.57E-01	1.92E-02	70
KI= 818.21	FE=074	818.26	9.83E-01	1.72E-01	2.10E-02	98
KI= 821.31	FE=075	821.46	6.71E-01	1.59E-01	1.94E-02	104
KI= 824.21	FE=076	824.33	7.13E-01	1.48E-01	1.79E-02	106
KI= 825.71	FE=077	825.57	1.30E+00	2.69E-01	3.25E-02	100
KI= 828.11	FE=078	828.24	6.37E-01	1.53E-01	1.85E-02	106
KI= 834.41	FE=079	834.50	6.82E-01	1.63E-01	1.95E-02	106
KI= 837.01	FE=080	837.13	7.10E-01	1.64E-01	1.96E-02	98
KI= 840.81	FE=081	840.83	6.66E-01	1.63E-01	1.93E-02	98
KI= 842.71	FE=082	842.78	7.79E-01	1.71E-01	2.03E-02	106
KI= 844.21	FE=083	844.33	7.14E-01	1.74E-01	2.06E-02	100
KI= 846.21	FE=084	846.32	7.37E-01	1.71E-01	2.02E-02	91
KI= 848.21	FE=085	848.20	7.94E-01	1.49E-01	1.76E-02	62
KI= 850.91	FE=086	851.06	8.70E-01	2.08E-01	2.44E-02	39
KI= 852.81	FE=087	852.80	4.49E-01	1.18E-01	1.39E-02	24
KI= 854.41	FE=088	854.40	9.15E-01	1.93E-01	2.26E-02	106
KI= 856.11	FE=089	856.24	8.26E-01	1.82E-01	2.12E-02	106
KI= 860.01	FE=090	860.09	7.04E-01	1.68E-01	1.96E-02	102
KI= 862.21	FE=091	862.31	8.24E-01	1.70E-01	1.97E-02	104
KI= 863.81	FE=092	863.76	6.91E-01	1.75E-01	2.02E-02	74
KI= 865.01	FE=093	864.97	6.94E-01	1.56E-01	1.80E-02	106
KI= 867.41	FE=094	867.51	5.47E-01	1.43E-01	1.65E-02	72
KI= 869.51	FE=095	869.59	7.05E-01	1.74E-01	2.00E-02	94
KI= 871.21	FE=096	871.19	7.28E-01	1.48E-01	1.70E-02	106
KI= 873.11	FE=097	873.10	7.62E-01	1.81E-01	2.08E-02	92
KI= 877.11	FE=098	877.15	7.34E-01	1.76E-01	2.00E-02	104
KI= 880.01	FE=099	880.00	6.23E-01	1.59E-01	1.80E-02	106
KI= 881.61	FE=100	881.54	6.50E-01	1.61E-01	1.83E-02	106
KI= 884.51	FE=102	884.52	6.97E-01	1.76E-01	1.99E-02	106
KI= 887.41	FE=103	887.32	7.75E-01	1.89E-01	2.13E-02	97
KI= 890.91	FE=104	890.89	9.50E-01	1.99E-01	2.24E-02	95
KI= 892.61	FE=105	892.50	7.53E-01	1.70E-01	1.91E-02	83
KI= 894.61	FE=106	894.57	7.98E-01	2.11E-01	2.36E-02	106
KI= 895.91	FE=107	895.89	8.08E-01	2.06E-01	2.30E-02	104
KI= 897.61	FE=108	897.63	8.55E-01	2.05E-01	2.28E-02	104
8900-n-C9-ANE1	FE=109	900.00	1.62E-02	1.58E-03	1.75E-04	106
KI= 901.31	FE=110	901.80	2.34E+00	8.05E-01	8.93E-02	47
KI= 908.41	FE=112	908.41	2.44E+00	3.48E-01	3.84E-02	106
KI= 910.81	FE=113	910.86	7.72E-01	2.02E-01	2.21E-02	106

TABLE 38 (continued)

KI= 913.91	FE=114	913.91	7.28E-01	1.79E-01	1.96E-02	106
KI= 915.41	FE=115	915.38	9.32E-01	2.09E-01	2.29E-02	105
KI= 917.71	FE=116	917.97	1.43E+00	3.64E-01	3.97E-02	106
KI= 920.11	FE=117	920.06	7.32E-01	1.83E-01	1.99E-02	106
KI= 922.61	FE=118	922.62	7.77E-01	1.71E-01	1.86E-02	106
KI= 924.71	FE=119	924.73	7.34E-01	1.91E-01	2.07E-02	106
KI= 929.11	FE=120	928.82	1.18E+00	3.00E-01	3.23E-02	105
KI= 933.51	FE=122	933.53	6.20E-01	1.54E-01	1.65E-02	106
KI= 939.41	FE=123	939.47	6.30E-01	1.61E-01	1.71E-02	106
KI= 941.01	FE=124	941.16	1.61E+00	4.52E-01	4.80E-02	61
KI= 945.31	FE=125	945.25	1.39E+00	2.25E-01	2.38E-02	106
KI= 947.41	FE=126	947.39	7.40E-01	1.88E-01	1.99E-02	106
KI= 952.01	FE=127	952.02	6.41E-01	1.77E-01	1.86E-02	106
KI= 953.51	FE=128	953.50	6.82E-01	1.72E-01	1.80E-02	106
KI= 955.81	FE=129	955.78	7.33E-01	1.76E-01	1.84E-02	105
KI= 956.81	FE=130	957.08	2.15E+00	5.41E-01	5.66E-02	70
KI= 960.51	FE=131	960.51	7.49E-01	1.84E-01	1.92E-02	99
KI= 962.11	FE=132	962.09	7.71E-01	1.72E-01	1.75E-02	106
KI= 964.71	FE=133	964.71	5.22E-01	1.45E-01	1.50E-02	106
KI= 966.11	FE=134	965.93	6.86E-01	1.74E-01	1.80E-02	23
KI= 967.41	FE=135	967.37	8.88E-01	2.05E-01	2.12E-02	106
KI= 970.81	FE=136	970.85	5.54E-01	1.47E-01	1.52E-02	106
KI= 972.71	FE=137	972.70	6.18E-01	1.68E-01	1.73E-02	106
KI= 974.91	FE=138	974.80	6.13E-01	1.57E-01	1.61E-02	85
KI= 976.91	FE=139	976.89	5.84E-01	1.57E-01	1.61E-02	106
KI= 979.21	FE=140	979.18	6.01E-01	1.58E-01	1.62E-02	103
KI= 980.21	FE=141	980.19	1.08E+00	2.24E-01	2.28E-02	71
KI= 981.71	FE=142	981.65	5.70E-01	1.54E-01	1.57E-02	102
KI= 983.31	FE=143	983.22	8.63E-01	1.76E-01	1.79E-02	100
KI= 986.21	FE=144	986.14	7.02E-01	1.47E-01	1.50E-02	106
KI= 989.01	FE=145	988.96	6.28E-01	1.69E-01	1.71E-02	106
KI= 993.51	FE=146	993.50	7.93E-01	2.03E-01	2.04E-02	104
KI= 995.31	FE=147	995.22	6.02E-01	1.60E-01	1.61E-02	97
KI= 996.81	FE=148	996.71	1.47E+00	1.92E-01	1.92E-02	84
\$1000-n-C10-ANE:FE=149			2.08E-03	2.03E-04	2.03E-05	106
KI=1003.91	FE=150	1003.82	8.06E-01	1.82E-01	1.82E-02	106
KI=1009.01	FE=151	1009.03	2.57E+00	5.86E-01	5.80E-02	60
KI=1013.91	FE=152	1013.87	6.57E-01	1.59E-01	1.56E-02	106
KI=1017.01	FE=153	1017.02	7.35E-01	1.76E-01	1.73E-02	106
KI=1019.31	FE=154	1019.15	9.77E-01	1.76E-01	1.73E-02	69
KI=1020.11	FE=155	1020.09	7.53E-01	1.74E-01	1.71E-02	74
KI=1022.91	FE=156	1022.89	6.29E-01	1.52E-01	1.48E-02	106
KI=1025.81	FE=157	1025.76	6.80E-01	1.60E-01	1.56E-02	106
KI=1028.41	FE=158	1028.35	7.68E-01	1.79E-01	1.74E-02	104
KI=1031.61	FE=159	1031.58	6.61E-01	1.56E-01	1.51E-02	103
KI=1033.41	FE=160	1033.33	1.01E+00	2.08E-01	2.02E-02	96
KI=1034.61	FE=161	1034.59	7.65E-01	1.85E-01	1.79E-02	99
KI=1036.61	FE=162	1036.55	7.60E-01	1.83E-01	1.77E-02	102
KI=1038.51	FE=163	1038.49	6.75E-01	1.66E-01	1.60E-02	104
KI=1040.61	FE=164	1040.60	7.81E-01	1.75E-01	1.68E-02	63
KI=1043.21	FE=165	1043.20	8.23E-01	1.87E-01	1.79E-02	106
KI=1044.71	FE=166	1044.73	7.64E-01	1.75E-01	1.67E-02	94
KI=1046.41	FE=167	1046.39	7.62E-01	1.74E-01	1.67E-02	106
KI=1049.41	FE=168	1049.39	1.90E+00	3.41E-01	3.25E-02	74
KI=1050.61	FE=169	1050.62	9.81E-01	2.06E-01	1.96E-02	104
KI=1053.81	FE=170	1053.80	8.13E-01	1.82E-01	1.73E-02	106
KI=1055.31	FE=171	1055.73	1.75E+00	5.40E-01	5.12E-02	75
KI=1057.91	FE=173	1057.96	7.51E-01	1.72E-01	1.62E-02	106
KI=1060.81	FE=174	1060.86	8.26E-01	1.72E-01	1.62E-02	106
KI=1064.61	FE=175	1064.60	6.89E-01	1.59E-01	1.48E-02	106
KI=1066.21	FE=176	1066.28	7.55E-01	1.67E-01	1.57E-02	104



TABLE 38 (continued)

KI=1070.61	FE=177	1070.64	6.64E-01	1.63E-01	1.52E-02	103
KI=1072.81	FE=178	1072.79	8.49E-01	1.80E-01	1.68E-02	106
KI=1079.01	FE=179	1079.05	8.34E-01	1.79E-01	1.66E-02	106
KI=1081.61	FE=180	1081.62	1.43E+00	3.02E-01	2.79E-02	104
KI=1084.31	FE=181	1084.37	9.34E-01	1.98E-01	1.83E-02	102
KI=1087.21	FE=182	1087.21	8.48E-01	1.98E-01	1.82E-02	104
KI=1089.41	FE=183	1089.46	8.42E-01	1.88E-01	1.72E-02	98
KI=1090.81	FE=184	1090.82	1.07E+00	1.99E-01	1.83E-02	95
KI=1093.81	FE=185	1093.84	8.84E-01	1.92E-01	1.75E-02	80
KI=1096.01	FE=186	1096.04	9.27E-01	2.09E-01	1.91E-02	106
81100-n-C11-ANE1	FE=187	1100.00	6.10E-03	5.96E-04	5.41E-05	106
KI=1101.71	FE=188	1101.95	7.50E-01	1.55E-01	1.41E-02	41
KI=1104.41	FE=189	1104.46	1.08E+00	2.11E-01	1.91E-02	100
KI=1106.61	FE=190	1106.40	1.20E+00	3.22E-01	2.91E-02	17
KI=1108.41	FE=191	1108.49	9.30E-01	2.02E-01	1.82E-02	100
KI=1110.31	FE=192	1110.31	9.58E-01	2.20E-01	1.98E-02	43
KI=1112.61	FE=193	1112.63	8.08E-01	1.92E-01	1.73E-02	104
KI=1115.81	FE=194	1115.84	1.18E+00	2.26E-01	2.02E-02	94
KI=1117.71	FE=195	1117.78	9.19E-01	2.09E-01	1.87E-02	101
KI=1119.71	FE=196	1119.71	8.33E-01	1.92E-01	1.72E-02	60
KI=1123.41	FE=198	1123.52	7.61E-01	1.97E-01	1.76E-02	97
KI=1127.01	FE=199	1127.10	8.21E-01	1.93E-01	1.71E-02	104
KI=1129.41	FE=200	1129.56	1.32E+00	2.91E-01	2.58E-02	105
KI=1132.71	FE=201	1132.55	1.55E+00	2.92E-01	2.58E-02	43
KI=1133.71	FE=202	1133.46	1.03E+00	3.26E-01	2.88E-02	19
KI=1135.01	FE=203	1135.07	7.14E-01	1.78E-01	1.57E-02	83
KI=1137.11	FE=204	1137.18	7.60E-01	1.88E-01	1.65E-02	69
KI=1139.71	FE=205	1139.57	1.08E+00	2.32E-01	2.03E-02	81
KI=1141.01	FE=206	1141.04	8.41E-01	1.89E-01	1.66E-02	91
KI=1144.01	FE=207	1144.11	7.96E-01	1.75E-01	1.53E-02	104
KI=1148.31	FE=208	1148.40	8.12E-01	1.97E-01	1.71E-02	101
KI=1149.81	FE=209	1149.77	1.30E+00	1.95E-01	1.70E-02	73
KI=1152.61	FE=210	1152.37	1.53E+00	4.26E-01	3.70E-02	103
KI=1155.01	FE=211	1155.02	7.31E-01	1.72E-01	1.49E-02	67
KI=1156.11	FE=212	1156.19	9.09E-01	1.88E-01	1.62E-02	101
KI=1158.01	FE=213	1158.04	8.45E-01	1.81E-01	1.54E-02	62
KI=1159.81	FE=214	1159.97	8.27E-01	1.89E-01	1.63E-02	102
KI=1161.81	FE=215	1161.81	7.02E-01	1.64E-01	1.43E-02	79
KI=1164.21	FE=216	1164.28	7.53E-01	1.75E-01	1.50E-02	102
KI=1170.41	FE=217	1170.44	8.93E-01	1.83E-01	1.54E-02	90
KI=1171.41	FE=218	1171.41	1.28E+00	3.78E-01	3.23E-02	37
KI=1175.91	FE=219	1175.80	1.35E+00	3.72E-01	3.16E-02	84
KI=1179.71	FE=220	1179.67	1.50E+00	2.72E-01	2.31E-02	85
KI=1181.41	FE=221	1181.52	7.61E-01	1.84E-01	1.54E-02	99
KI=1185.31	FE=222	1185.42	1.40E+00	2.73E-01	2.30E-02	98
KI=1189.61	FE=223	1189.69	8.64E-01	2.04E-01	1.72E-02	89
KI=1191.51	FE=224	1191.53	1.07E+00	2.45E-01	2.06E-02	82
KI=1193.91	FE=225	1193.98	7.84E-01	1.79E-01	1.50E-02	81
KI=1195.41	FE=226	1195.80	1.94E+00	6.22E-01	5.21E-02	11
81200-n-C12-ANE1	FE=227	1200.00	2.86E-02	2.80E-03	2.33E-04	104
KI=1203.41	FE=228	1203.44	1.00E+00	2.08E-01	1.73E-02	79
KI=1205.61	FE=229	1205.65	8.59E-01	1.82E-01	1.51E-02	83
KI=1207.21	FE=230	1207.14	4.04E-01	1.74E-01	1.44E-02	7
KI=1210.91	FE=231	1210.99	1.63E+00	2.82E-01	2.33E-02	94
KI=1214.21	FE=232	1214.28	7.18E-01	1.62E-01	1.33E-02	102
KI=1218.21	FE=233	1218.26	9.60E-01	1.81E-01	1.49E-02	64
KI=1220.01	FE=234	1219.86	6.11E-01	1.62E-01	1.32E-02	20
KI=1221.71	FE=235	1221.82	8.16E-01	1.88E-01	1.54E-02	92
KI=1224.31	FE=236	1224.39	7.36E-01	1.68E-01	1.37E-02	77
KI=1227.81	FE=237	1227.92	1.51E+00	3.06E-01	2.49E-02	98
KI=1233.91	FE=238	1233.95	7.54E-01	1.84E-01	1.49E-02	101

TABLE 38 (Concluded)

KI=1238.61	FE=239	1238.73	8.29E-01	1.93E-01	1.56E-02	100
KI=1241.71	FE=240	1241.82	8.88E-01	1.82E-01	1.46E-02	90
KI=1245.41	FE=241	1245.50	1.03E+00	2.00E-01	1.60E-02	91
KI=1248.51	FE=242	1248.53	9.84E-01	1.93E-01	1.54E-02	89
KI=1252.81	FE=243	1252.92	7.25E-01	1.70E-01	1.35E-02	98
KI=1254.81	FE=244	1255.00	1.56E+00	1.95E-01	1.55E-02	97
KI=1259.31	FE=245	1259.41	7.68E-01	1.70E-01	1.35E-02	100
KI=1264.01	FE=246	1264.12	7.21E-01	1.64E-01	1.30E-02	100
KI=1267.61	FE=247	1267.62	1.02E+00	2.01E-01	1.58E-02	89
KI=1270.21	FE=248	1270.38	6.71E-01	1.62E-01	1.28E-02	96
KI=1273.11	FE=249	1273.23	5.63E-01	1.43E-01	1.13E-02	100
KI=1276.11	FE=250	1276.00	5.11E-01	1.26E-01	9.89E-03	20
KI=1277.51	FE=251	1277.62	7.80E-01	1.78E-01	1.40E-02	54
KI=1282.71	FE=253	1282.75	8.58E-01	1.71E-01	1.33E-02	100
KI=1285.61	FE=254	1285.74	9.63E-01	2.04E-01	1.59E-02	80
KI=1288.31	FE=255	1288.09	8.98E-01	2.05E-01	1.59E-02	32
KI=1294.21	FE=256	1294.28	8.92E-01	2.10E-01	1.62E-02	92
§1300-n-C13-ANE	FE=257	1300.00	6.35E-03	6.32E-04	4.86E-05	102
KI=1304.41	FE=258	1304.44	1.34E+00	3.89E-01	2.99E-02	30
KI=1309.61	FE=259	1309.72	8.14E-01	1.58E-01	1.20E-02	82
KI=1311.51	FE=260	1311.64	9.19E-01	1.81E-01	1.38E-02	76
KI=1318.01	FE=262	1318.08	9.46E-01	1.78E-01	1.35E-02	97
KI=1323.11	FE=263	1323.15	1.36E+00	3.40E-01	1.81E-02	47
KI=1328.01	FE=264	1328.29	1.56E+00	3.77E-01	2.84E-02	74
KI=1333.41	FE=265	1333.53	1.09E+00	2.08E-01	1.56E-02	87
KI=1338.41	FE=266	1338.47	2.07E+00	2.66E-01	1.99E-02	91
KI=1342.21	FE=267	1342.27	5.57E-01	1.28E-01	9.52E-03	67
KI=1344.51	FE=268	1344.55	5.48E-01	1.58E-01	1.17E-02	19
KI=1347.51	FE=269	1347.43	4.71E-01	1.07E-01	7.94E-03	44
KI=1351.11	FE=270	1351.14	7.84E-01	1.58E-01	1.17E-02	95
KI=1354.01	FE=271	1354.15	8.06E-01	1.31E-01	9.68E-03	83
KI=1358.91	FE=272	1358.95	6.22E-01	1.27E-01	9.34E-03	95
KI=1364.01	FE=273	1364.05	6.25E-01	1.31E-01	9.62E-03	95
KI=1370.31	FE=274	1370.41	5.07E-01	1.28E-01	9.36E-03	93
KI=1376.71	FE=275	1376.77	4.57E-01	1.00E-01	7.27E-03	98
KI=1383.01	FE=276	1383.11	1.10E+00	2.33E-01	1.69E-02	86
KI=1388.61	FE=277	1388.58	4.64E-01	1.02E-01	7.34E-03	75
KI=1393.41	FE=278	1393.51	4.88E-01	1.30E-01	9.30E-03	91
§1400-n-C14-ANE	FE=279	1400.00	5.69E-02	5.69E-03	4.06E-04	100
KI=1404.01	FE=280	1404.02	3.58E-01	8.49E-02	6.04E-03	72
KI=1407.91	FE=281	1407.87	7.64E-01	1.31E-01	9.29E-03	87
KI=1411.11	FE=282	1410.99	6.49E-01	1.27E-01	8.98E-03	84
KI=1413.61	FE=283	1414.18	4.23E+00	1.03E+00	7.31E-02	49
KI=1422.01	FE=285	1421.99	5.95E-01	1.54E-01	1.08E-02	24
KI=1427.21	FE=286	1427.00	2.59E+00	3.94E-01	2.76E-02	75
KI=1430.31	FE=287	1430.14	4.68E-01	1.01E-01	7.04E-03	43
KI=1434.11	FE=288	1434.05	6.00E-01	1.31E-01	9.15E-03	29
KI=1443.21	FE=289	1443.13	3.33E+00	3.76E-01	2.61E-02	73
KI=1446.11	FE=290	1446.10	5.68E-01	1.14E-01	7.92E-03	51
KI=1450.51	FE=291	1450.51	3.98E-01	9.53E-02	6.57E-03	39
KI=1453.41	FE=292	1453.49	3.76E-01	8.51E-02	5.86E-03	68
KI=1458.71	FE=293	1458.62	4.99E-01	1.05E-01	7.21E-03	72
KI=1462.71	FE=294	1462.68	4.44E-01	7.33E-02	5.01E-03	88
KI=1470.71	FE=295	1470.70	3.33E-01	7.61E-02	5.17E-03	69
§1500-n-C15-ANE	FE=296	1500.00	0.00E+00	0.00E+00	0.00E+00	95
§1600-n-C16-ANE	FE=297	1600.00	0.00E+00	0.00E+00	0.00E+00	76
SANTH-§10(1S) (KI=1772)		1773.12	4.00E+01	7.57E+00	4.27E-01	106
§2118-(IMPURITY #3)		2118.00	3.76E-02	3.76E-03	1.78E-04	100
TOTAL CONCENTRATION		5000.00	0.00E+00	0.00E+00	0.00E+00	106

TABLE 39. SUMMARY OF PERCENT NUMBER OF PEAKS NAMED AND PERCENT CONCENTRATION OF PEAKS NAMED IN DUPLICATE GC/FID ANALYSES OF DISTILLATE FUEL SAMPLES

MRC Sample ID No.	Percent Number Named vs. Total Number of Peaks		Percent Concentration Named Peaks vs. Total Concentration	
	Analysis No. 1	Analysis No. 2	Analysis No. 1	Analysis No. 2
585	86.3	86.7	99.2	100
588	95.2	95.2	100	97.8
589	89.8	89.5	100	98.9
590	94.0	92.9	98.6	100
591	95.7	96.0	97.7	100
592	93.2	94.0	98.9	100
593	96.6	97.3	96.4	95.4
594	88.6	91.7	98.2	100
595	94.5	93.7	95.9	100
596	95.7	96.1	96.4	100
597	98.3	98.3	97.6	97.8
598	95.1	94.7	100	100
599	97.1	97.9	100	99.6
600	95.6	95.5	96.5	95.7
601	94.6	94.2	95.4	96.8
602	94.4	95.9	99.8	96.0
603	98.2	97.4	97.9	100
604	94.5	95.6	95.8	94.7
605	96.8	95.7	94.4	98.4
606	75.4	76.4	88.1	83.4
607	98.9	93.5	100	95.8
608	94.3	93.5	94.7	93.9
609	91.9	92.2	98.7	100
610	98.1	97.1	97.8	96.7
611	93.3	94.3	96.3	99.5
612	95.5	-	91.8	-
613	95.5	94.4	100	100
614	93.2	93.2	94.3	94.2
615	89.3	88.1	100	100
616	98.8	98.1	96.4	100
617	95.6	95.7	92.5	97.4
618	96.2	96.6	99.0	100
619	94.3	95.2	98.9	100

TABLE 39 (Concluded)

MRC Sample ID No.	Percent Number Named vs. Total Number of Peaks		Percent Concentration Named Peaks vs. Total Concentration	
	Analysis No. 1	Analysis No. 2	Analysis No. 1	Analysis No. 2
620	95.7	95.4	97.1	97.6
621	95.6	97.1	99.8	100
622	89.5	88.9	99.0	100
623	96.5	95.2	97.1	96.6
624	96.1	95.7	100	90.9
625	97.7	97.0	100	100
626	95.6	95.3	99.4	99.3
627	98.3	-	99.5	-
628	95.8	95.2	100	97.3
629	95.3	94.3	100	98.2
630	98.6	96.8	100	100
631	92.0	94.0	100	94.5
632	93.7	94.4	100	100
633	92.5	92.6	100	99.3
634	96.5	96.4	99.5	100
635	98.2	99.1	100	100
636	89.2	90.6	95.8	100
637	95.1	95.6	97.8	97.9
638	97.7	98.2	96.9	91.6
639	91.4	89.6	98.7	99.0
640	88.1	87.5	92.5	92.7
643	93.2	93.6	95.7	100
644	93.6	97.3	97.6	96.4

TABLE 40. CONCENTRATION (in mg/ml) OF ALL NAMED COMPOUNDS DETECTED IN DUPLICATE ANALYSES OF A PETROLEUM-DERIVED JP-5 AND A SHALE-DERIVED JP-4 FUEL

CONCENTRATIONS OF NAMED COMPOUNDS IN SAMPLES IN DATA BASE MH11 NUMBER OF SAMPLES= 4					
SAMPLE NAME					
COMPOUND NAME		606JP4MEC01	606JP4MEC02	640JP4MEC02	640JP4MEC01
		(mg/ml)	(mg/ml)	(mg/ml)	(mg/ml)
PROCESSED FILE		BKP160	BKP161	BKP251	BKP250
8500-n-C5-ANE1	FE=005	0.0000	0.0000	.4000	.4308
CH2CL2 SOLVENT		0.0000	0.0000	0.0000	0.0000
KI= 549.71	FE=010	0.0000	0.0000	0.0000	.1214
KI= 552.41	FE=011	0.0000	0.0000	.1230	0.0000
IMPURITY #1(KI= 558.6)		.1871	.0896	.1377	.1259
KI= 560.41	FE=012	0.0000	0.0000	1.9713	2.0327
KI= 577.31	FE=013	0.0000	0.0000	1.2060	1.2543
8600-n-C6-ANE1	FE=014	0.0000	0.0000	3.7144	3.8379
KI= 624.81	FE=018	0.0000	0.0000	1.6951	1.7296
KI= 632.41	FE=020	0.0000	0.0000	.2739	.2857
KI= 656.11	FE=022	0.0000	0.0000	2.0771	2.1384
KI= 658.81	FE=023	0.0000	0.0000	.4843	.4970
KI= 669.01	FE=024	0.0000	0.0000	2.1106	2.1839
KI= 670.41	FE=025	0.0000	0.0000	2.1604	2.2328
IMPURITY #2(KI= 674.4)		.6400	.6436	.6815	.6908
KI= 677.41	FE=026	0.0000	0.0000	4.9475	5.0873
KI= 679.81	FE=027	0.0000	0.0000	.6529	.6592
KI= 682.01	FE=028	0.0000	0.0000	.5636	.5710
KI= 685.81	FE=030	0.0000	0.0000	1.2692	1.3078
8700-n-C7-ANE1	FE=031	3.0000	0.0000	8.3783	8.6252
KI= 712.51	FE=036	0.0000	0.0000	9.9929	10.2880
KI= 715.61	FE=037	0.0000	0.0000	.2682	.2838
KI= 725.81	FE=039	0.0000	0.0000	1.2561	1.2938
KI= 730.01	FE=040	0.0000	0.0000	.3324	.3620
KI= 731.01	FE=041	0.0000	0.0000	1.2024	1.2291
KI= 733.61	FE=042	0.0000	0.0000	.7069	.7179
KI= 735.01	FE=043	0.0000	0.0000	.1182	.1102
KI= 741.21	FE=044	0.0000	0.0000	.6764	.6894
KI= 743.31	FE=045	0.0000	0.0000	.1668	.1625
KI= 749.91	FE=047	0.0000	0.0000	0.0000	.4897
KI= 753.91	FE=048	0.0000	0.0000	.3549	.3660
KI= 757.11	FE=049	0.0000	0.0000	1.7918	1.8311
KI= 758.81	FE=050	0.0000	0.0000	7.4043	7.5442
KI= 765.31	FE=052	0.0000	0.0000	7.3566	7.5071
KI= 766.41	FE=053	0.0000	0.0000	2.9135	3.0068
KI= 768.81	FE=054	0.0000	0.0000	5.6780	5.7979
KI= 770.61	FE=055	0.0000	0.0000	2.0814	2.1304
KI= 772.41	FE=056	0.0000	0.0000	4.5415	4.6355
KI= 775.21	FE=057	0.0000	0.0000	.4464	.4492
KI= 781.01	FE=058	0.0000	0.0000	.9146	.9309
KI= 783.21	FE=059	0.0000	0.0000	.8216	.8453
KI= 784.41	FE=060	0.0000	0.0000	1.4525	1.4825
KI= 786.91	FE=062	0.0000	0.0000	3.3824	3.4601
KI= 794.41	FE=064	0.0000	0.0000	.2712	.2623
KI= 795.71	FE=065	0.0000	0.0000	4.3974	4.5070
8800-n-C8-ANE1	FE=066	.1205	.1287	10.6848	10.9283
KI= 802.51	FE=067	0.0000	0.0000	.4994	.5073

TABLE 40 (continued)

KI= 807.11	FE=049	0.0000	0.0000	.1131	.1171
KI= 813.61	FE=072	0.0000	0.0000	.4895	.4980
KI= 818.21	FE=074	0.0000	0.0000	2.4315	2.4790
KI= 821.31	FE=075	0.0000	0.0000	.5471	.5567
KI= 824.21	FE=076	0.0000	0.0000	4.1920	4.2721
KI= 825.71	FE=077	0.0000	0.0000	1.2739	1.3016
KI= 828.11	FE=078	.0888	.0922	9.3399	9.5325
KI= 834.41	FE=079	0.0000	0.0000	2.4395	2.6758
KI= 837.01	FE=080	0.0000	0.0000	.4374	.4416
KI= 840.81	FE=081	0.0000	0.0000	.2862	.2839
KI= 842.71	FE=082	.1340	.1317	3.8943	3.9439
KI= 844.21	FE=083	0.0000	0.0000	.5731	.5810
KI= 846.21	FE=084	0.0000	0.0000	.1724	.1752
KI= 848.21	FE=085	0.0000	0.0000	.6534	.6650
KI= 850.91	FE=086	0.0000	0.0000	.1753	.1792
KI= 852.81	FE=087	0.0000	0.0000	.2426	.2437
KI= 854.41	FE=088	0.0000	0.0000	3.1553	3.2036
KI= 856.11	FE=089	0.0000	0.0000	1.2777	1.3097
KI= 860.01	FE=090	0.0000	0.0000	1.0513	1.0700
KI= 862.21	FE=091	0.0000	0.0000	7.1686	7.3663
KI= 863.81	FE=092	0.0000	0.0000	3.5623	3.6398
KI= 865.01	FE=093	.1304	.1317	0.0000	0.0000
KI= 867.41	FE=094	0.0000	0.0000	1.7944	1.8224
KI= 871.21	FE=096	.3579	.3623	7.1942	7.3153
KI= 873.11	FE=097	0.0000	0.0000	1.3634	1.4871
KI= 877.11	FE=098	0.0000	0.0000	.4257	.4362
KI= 880.01	FE=099	.4825	.4925	1.9421	1.9989
KI= 881.61	FE=100	.2104	.2171	.1351	.1414
KI= 884.51	FE=102	.1344	.2083	3.1503	3.1917
KI= 887.41	FE=103	0.0000	0.0000	.5027	.5131
KI= 890.91	FE=104	0.0000	0.0000	1.6511	1.6674
KI= 892.61	FE=105	0.0000	.1238	0.0000	0.0000
KI= 894.61	FE=106	.1303	.1378	1.4224	.1879
KI= 895.91	FE=107	0.0000	0.0000	1.4462	1.4802
KI= 897.61	FE=108	.1457	.1395	0.0000	0.0000
8900-n-C9-ANE1	FE=109	1.1495	1.1794	.8845	.8440
KI= 901.31	FE=110	.1181	.1189	0.0000	0.0000
KI= 910.81	FE=113	0.0000	0.0000	.8568	.8691
KI= 913.91	FE=114	.1621	.1683	.7901	.7939
KI= 915.41	FE=115	0.0000	0.0000	.6639	.6691
KI= 917.71	FE=116	.3769	.0851	0.0000	0.0000
KI= 920.11	FE=117	.3905	.3999	1.4139	1.4389
KI= 922.61	FE=118	.5774	.5881	3.4709	3.5167
KI= 924.71	FE=119	.4110	.4210	.9406	.9543
KI= 929.11	FE=120	1.0335	1.0550	2.3705	2.4028
KI= 933.51	FE=122	2.3758	2.4192	7.5675	7.6691
KI= 939.41	FE=123	.5712	1.2921	2.7748	2.8206
KI= 941.01	FE=124	0.0000	.3380	.2066	.2055
KI= 945.31	FE=125	.2546	.5361	3.2453	3.2939
KI= 947.41	FE=126	.3740	.5866	.9111	.9413
KI= 952.01	FE=127	1.3828	1.4036	1.3248	1.3418
KI= 953.51	FE=128	1.9859	2.0242	1.9353	1.9756
KI= 955.81	FE=129	2.3314	2.3606	1.4727	1.5147
KI= 956.81	FE=130	.4488	.4561	0.0000	0.0000
KI= 960.51	FE=131	1.2213	1.2265	2.0987	2.1048
KI= 962.11	FE=132	3.6595	3.7374	5.5957	5.6778
KI= 964.71	FE=133	4.2245	4.2937	2.1995	2.2294
KI= 966.11	FE=134	0.0000	0.0000	4.1790	4.2414
KI= 967.41	FE=135	3.5442	3.6030	0.0000	0.0000
KI= 970.81	FE=136	3.6431	3.7163	2.7277	2.7608
KI= 972.71	FE=137	1.5675	1.3759	1.0358	1.0364

TABLE 40 (continued)

KI= 974.91	FE=138	0.0000	.2251	.2275	.2339
KI= 976.91	FE=139	3.4781	3.5435	3.6973	3.7421
KI= 979.21	FE=140	2.8412	1.8851	3.3163	3.3498
KI= 980.21	FE=141	0.0000	1.0194	0.0000	0.0000
KI= 981.71	FE=142	1.4610	1.4823	1.0273	1.0284
KI= 983.31	FE=143	1.1142	1.1231	.5794	.5880
KI= 986.21	FE=144	4.1993	4.2803	4.7644	4.8239
KI= 989.01	FE=145	1.8621	1.8954	1.6857	1.7141
KI= 993.51	FE=146	2.4995	2.5433	1.8204	1.8442
KI= 995.31	FE=147	.6054	.6182	.5341	.5524
KI= 996.81	FE=148	1.0174	1.0360	.4928	.4891
81000-n-C10-ANE:FE=149		12.1210	12.3645	24.2212	24.5274
KI=1003.91	FE=150	1.8965	1.9352	1.3360	1.3575
KI=1009.01	FE=151	.1285	.5010	.1770	.1707
KI=1013.91	FE=152	4.7490	4.8283	3.7548	3.7959
KI=1017.01	FE=153	2.2417	2.2903	1.8558	1.8572
KI=1019.31	FE=154	0.0000	0.0000	.9651	.9898
KI=1020.11	FE=155	3.3519	3.3998	.5409	.5580
KI=1022.91	FE=156	4.5341	4.6057	7.9684	8.0548
KI=1025.81	FE=157	6.1180	6.2384	3.7467	3.8089
KI=1028.41	FE=158	5.9976	6.0858	3.0210	3.0199
KI=1031.61	FE=159	3.6669	3.7052	2.8272	2.8535
KI=1033.41	FE=160	0.0000	0.0000	1.6254	1.5971
KI=1034.61	FE=161	4.3609	4.5166	1.7435	1.8093
KI=1036.61	FE=162	1.1562	1.1350	.4437	.4014
KI=1038.51	FE=163	2.3927	2.4350	2.1347	2.1210
KI=1040.61	FE=164	1.0110	1.0420	.4192	.3907
KI=1043.21	FE=165	4.4435	4.5404	8.3880	8.3467
KI=1044.71	FE=166	.8100	.7998	0.0000	0.0000
KI=1046.41	FE=167	5.1904	5.2868	4.5979	4.5837
KI=1049.41	FE=168	1.3042	1.2992	.6420	.6198
KI=1050.61	FE=169	4.0174	4.1694	1.9538	1.9416
KI=1053.81	FE=170	3.5159	3.6285	2.7729	2.6921
KI=1055.31	FE=171	.9307	.8825	0.0000	0.0000
KI=1057.91	FE=173	5.8953	6.0091	2.6854	2.5952
KI=1060.81	FE=174	5.9595	6.0633	2.6224	2.5829
KI=1064.61	FE=175	7.7130	7.8590	2.5474	2.5309
KI=1066.21	FE=176	1.6297	1.6595	.8288	.7467
KI=1070.61	FE=177	8.8958	9.0584	3.0848	2.9993
KI=1072.81	FE=178	3.9410	3.9816	1.9552	1.9127
KI=1079.01	FE=179	5.2041	5.1939	4.7237	4.3440
KI=1081.61	FE=180	3.0877	3.1548	2.2022	1.7474
KI=1084.31	FE=181	3.4984	3.4607	1.4372	.8593
KI=1087.21	FE=182	2.9851	3.0352	2.8081	1.7535
KI=1089.41	FE=183	1.0989	1.1277	1.2253	.4879
KI=1090.81	FE=184	1.6592	1.6196	1.2892	.2579
KI=1093.81	FE=185	1.8353	1.8300	1.4101	.6043
KI=1096.01	FE=186	2.2453	2.2276	2.5084	1.9085
81100-n-C11-ANE:FE=187		28.0700	28.4257	34.5061	33.9368
KI=1101.71	FE=188	.9867	.9237	0.0000	0.0000
KI=1104.41	FE=189	2.1462	2.0842	1.7890	1.3033
KI=1106.61	FE=190	0.0000	0.0000	.6534	.3937
KI=1108.41	FE=191	1.7105	1.6318	.6392	.4071
KI=1110.31	FE=192	1.3081	1.2165	1.3132	.9979
KI=1112.61	FE=193	4.1779	4.1232	1.2051	.9297
KI=1115.81	FE=194	.4932	0.0000	2.7091	2.3146
KI=1117.71	FE=195	1.8263	1.9106	1.7039	1.4484
KI=1119.71	FE=196	1.2616	1.1693	.5225	.2645
KI=1123.41	FE=198	2.8085	2.6931	1.6910	1.2784
KI=1127.01	FE=199	4.0159	3.9336	2.9133	2.7003
KI=1129.41	FE=200	9.7467	9.6434	3.8617	3.5249

TABLE 40 (continued)

KI=1133.71	FE=202	1.1508	3.0522	.7494	0.0000
KI=1135.01	FE=203	2.6133	2.6128	1.9567	2.0620
KI=1137.11	FE=204	1.3194	1.1323	.6420	.4948
KI=1139.71	FE=205	0.0000	0.0000	1.7140	1.6529
KI=1141.01	FE=206	12.4179	12.2404	2.4078	2.4549
KI=1144.01	FE=207	3.7423	3.4556	2.1336	1.8918
KI=1148.31	FE=208	5.4863	5.3676	1.9358	1.8289
KI=1149.81	FE=209	.9632	.8867	.8403	.7367
KI=1152.61	FE=210	12.3272	12.1769	4.2596	4.1885
KI=1155.01	FE=211	2.6710	2.7486	1.8636	1.9489
KI=1156.11	FE=212	5.1989	4.9368	2.4498	2.4151
KI=1158.01	FE=213	.7084	.5994	.1574	0.0000
KI=1159.81	FE=214	4.2657	4.1359	1.9889	1.9566
KI=1161.81	FE=215	1.9106	1.7779	.6510	.6110
KI=1164.21	FE=216	7.1444	6.8428	2.6337	2.5951
KI=1170.41	FE=217	7.6996	7.2876	4.0909	4.1044
KI=1175.91	FE=219	2.7427	2.4119	1.2931	1.1341
KI=1179.71	FE=220	4.4937	4.3444	2.7848	2.5598
KI=1181.41	FE=221	3.5183	3.3060	1.5882	1.4584
KI=1185.31	FE=222	6.2855	5.7943	2.4975	2.3267
KI=1189.61	FE=223	5.2376	4.8719	2.8473	2.1912
KI=1191.51	FE=224	1.3685	1.1833	0.0000	.6318
KI=1193.91	FE=225	1.4833	1.5223	0.0000	.2950
KI=1195.41	FE=226	1.5235	.8923	0.0000	0.0000
81200-n-C12-ANE	FE=227	20.0079	19.6942	26.6330	26.8446
KI=1203.41	FE=228	.9688	.5949	.7047	.7166
KI=1205.61	FE=229	3.4604	2.8337	1.7361	1.8641
KI=1207.21	FE=230	.2560	0.0000	0.0000	0.0000
KI=1210.91	FE=231	2.2440	1.4727	.5397	.6725
KI=1214.21	FE=232	8.7601	7.9241	12.3364	12.6443
KI=1218.21	FE=233	2.6755	2.2230	.5470	.7743
KI=1221.71	FE=235	2.0028	1.7605	.6283	1.0472
KI=1224.31	FE=236	1.3883	1.1976	.2564	.8295
KI=1227.81	FE=237	3.5415	3.4141	.6598	1.0202
KI=1233.91	FE=238	3.9303	3.9208	1.8131	1.8216
KI=1238.61	FE=239	3.0333	3.0292	1.5397	1.5217
KI=1241.71	FE=240	4.7540	4.8029	1.1650	1.1526
KI=1245.41	FE=241	.7348	.7461	1.2190	1.1940
KI=1248.51	FE=242	3.2470	3.7527	2.0008	1.9381
KI=1252.81	FE=243	2.8103	2.8873	1.2262	1.1543
KI=1254.81	FE=244	6.1919	6.2462	1.6003	1.6997
KI=1259.31	FE=245	2.8375	3.4153	2.0109	1.9334
KI=1264.01	FE=246	3.8456	3.9502	1.6051	1.5133
KI=1267.61	FE=247	1.3563	1.4418	.6549	.5720
KI=1270.21	FE=248	2.6403	2.7393	.9512	.8829
KI=1273.11	FE=249	4.6759	4.8347	7.6089	7.5218
KI=1276.11	FE=250	0.0000	.3047	.2409	0.0000
KI=1277.51	FE=251	0.0000	.3732	.3270	.4987
KI=1282.71	FE=253	3.5317	4.1070	1.7209	1.3862
KI=1285.61	FE=254	.9346	1.2302	.8145	.6047
KI=1288.31	FE=255	1.9597	2.4612	.9820	.8198
KI=1294.21	FE=256	2.0494	2.4515	1.4815	1.3514
81300-n-C13-ANE	FE=257	11.8774	12.2353	14.2986	14.2840
KI=1304.41	FE=258	.8533	.9434	.3864	.3864
KI=1309.61	FE=259	2.5565	2.1337	2.2170	2.2304
KI=1311.51	FE=260	1.5032	.6682	.4965	.4920
KI=1318.01	FE=262	3.4367	2.1615	1.8825	1.4824
KI=1323.11	FE=263	1.8916	1.4187	.2699	.2740
KI=1328.01	FE=264	1.2214	1.2233	.6743	.6713
KI=1333.41	FE=265	1.9630	1.9930	.5759	.5835
KI=1338.41	FE=266	1.8432	1.9536	.7779	.7467



TABLE 40 (Concluded)

KI=1342.21	FE=267	.5109	.5996	.3254	.2834
KI=1344.51	FE=268	.1008	0.0000	0.0000	0.0000
KI=1347.51	FE=269	.1454	.6934	.2079	.2082
KI=1351.11	FE=270	2.4241	2.9920	.4885	.4844
KI=1354.01	FE=271	1.1552	1.3261	.3352	.3358
KI=1358.91	FE=272	2.1241	2.3292	.7898	.7741
KI=1364.01	FE=273	1.8454	1.9350	.4795	.4735
KI=1370.31	FE=274	1.4454	1.6517	.4630	.4594
KI=1376.71	FE=275	.9243	.8145	2.7985	2.8020
KI=1383.01	FE=276	2.1050	1.8903	.4224	.4151
KI=1388.41	FE=277	.5009	.5124	.3274	.3312
KI=1393.41	FE=278	1.4725	1.4953	.4257	.4251
01400-n-C14-ANEI	FE=279	5.5851	5.4483	5.5784	5.5476
KI=1404.01	FE=280	.6900	.4971	.4447	.4431
KI=1411.11	FE=282	.1248	.1267	.1933	.1959
KI=1413.61	FE=283	1.2382	.0907	0.0000	0.0000
KI=1422.01	FE=295	.4484	.4677	0.0000	0.0000
KI=1427.21	FE=284	.4382	.4440	0.0000	0.0000
KI=1434.11	FE=288	.8415	.9210	.3621	.3542
KI=1443.21	FE=289	.3798	.4044	.1811	.1788
KI=1444.11	FE=290	.3514	.5004	.1284	.1259
KI=1450.51	FE=291	.5845	.6378	0.0000	0.0000
KI=1453.41	FE=292	1.0948	1.1452	.1294	.1227
KI=1458.71	FE=293	1.1545	1.2070	.3881	.3825
KI=1462.71	FE=294	1.7293	1.8885	2.3231	2.3941
KI=1470.71	FE=295	.6338	.9480	.3791	.4307
01500-n-C15-ANEI	FE=296	3.9800	4.0219	2.3561	2.3657
01600-n-C16-ANEI	FE=297	2.4034	2.4314	1.0170	1.0311
SANTH-410 (IS) (KI=1772)		10.0000	10.0000	10.0000	10.0000
02118-(IMPURITY 83)		.8591	.8139	1.3291	1.2493
TOTAL CONCENTRATION		578.1425	611.2716	604.9229	596.1488
CONC. NAMED PEAKS (mg/ml )		5.092E+02	5.093E+02	5.593E+02	5.524E+02
TOTAL CONC (mg/ml )		5.781E+02	6.113E+02	6.049E+02	5.961E+02
% CONC. NAMED VS. TOTAL		62.07484	83.34479	92.43514	92.64759
NO. OF NAMED PEAKS		178	181	237	237
TOTAL NO. OF PEAKS		234	237	269	271
% NAMED VS. TOTAL PEAKS		75.42374	76.37131	88.10410	87.45387

TABLE 41. CONCENTRATION (in % Rel.) OF ALL NAMED COMPOUNDS  
DETECTED IN DUPLICATE ANALYSES OF A PETROLEUM-  
DERIVED JP-5 AND A SHALE-DERIVED JP-4 FUEL

		CONCENTRATIONS OF NAMED COMPOUNDS IN SAMPLES			
		IN DATA BASE MH11			
		NUMBER OF SAMPLES= 4			
		SAMPLE NAME			
COMPOUND NAME		606JP4MEC01	606JP4MEC02	640JP4MEC02	640JP4MEC01
		(% REL.)	(% REL.)	(% REL.)	(% REL.)
PROCESSED FILE		BIP160	BIP161	BIP251	BIP250
8500-n-C5-ANE1	FE=005	0.0000	0.0000	4.9578	5.3396
CH2CL2 SOLVENT		0.0000	0.0000	0.0000	0.0000
KI= 549.71	FE=010	0.0000	0.0000	0.0000	9.4000
KI= 552.41	FE=011	0.0000	0.0000	7.9082	0.0000
IMPURITY #1(KI= 558.6)		125.7377	60.2236	92.5815	84.6355
KI= 560.41	FE=012	0.0000	0.0000	21.2360	21.8982
KI= 577.31	FE=013	0.0000	0.0000	18.7188	19.4484
8400-n-C6-ANE1	FE=014	0.0000	0.0000	23.5348	24.3170
KI= 624.81	FE=018	0.0000	0.0000	20.2017	20.6126
KI= 632.41	FE=020	0.0000	0.0000	16.8318	17.5537
KI= 656.11	FE=022	0.0000	0.0000	26.1439	26.9153
KI= 658.81	FE=023	0.0000	0.0000	13.3011	13.6506
KI= 669.01	FE=024	0.0000	0.0000	45.5336	47.1151
KI= 670.41	FE=025	0.0000	0.0000	18.9929	19.6296
IMPURITY #2(KI= 674.4)		85.3387	85.8111	90.8736	92.1116
KI= 677.41	FE=026	0.0000	0.0000	36.0885	37.1082
KI= 679.81	FE=027	0.0000	0.0000	26.7218	26.9775
KI= 682.01	FE=028	0.0000	0.0000	24.0597	24.3739
KI= 685.81	FE=030	0.0000	0.0000	96.0527	98.9735
8700-n-C7-ANE1	FE=031	0.0000	0.0000	33.5149	34.5023
KI= 712.51	FE=036	0.0000	0.0000	63.1886	65.0547
KI= 715.61	FE=037	0.0000	0.0000	18.7374	19.8314
KI= 725.81	FE=039	0.0000	0.0000	78.1569	80.8145
KI= 730.01	FE=040	0.0000	0.0000	13.9528	15.1914
KI= 731.01	FE=041	0.0000	0.0000	29.8043	30.4668
KI= 733.61	FE=042	0.0000	0.0000	44.1185	44.8074
KI= 735.01	FE=043	0.0000	0.0000	8.1619	7.6103
KI= 741.21	FE=044	0.0000	0.0000	43.7979	44.6358
KI= 743.31	FE=045	0.0000	0.0000	34.2874	33.0192
KI= 749.91	FE=047	0.0000	0.0000	0.0000	371.4329
KI= 753.91	FE=048	0.0000	0.0000	59.8519	61.7134
KI= 757.11	FE=049	0.0000	0.0000	42.0889	43.0119
KI= 758.81	FE=050	0.0000	0.0000	87.5137	89.1909
KI= 765.31	FE=052	0.0000	0.0000	41.3767	42.2233
KI= 766.41	FE=053	0.0000	0.0000	41.8706	43.2113
KI= 768.81	FE=054	0.0000	0.0000	122.6627	125.2543
KI= 770.61	FE=055	0.0000	0.0000	83.3450	85.3080
KI= 772.41	FE=056	0.0000	0.0000	22.4834	22.9488
KI= 775.21	FE=057	0.0000	0.0000	53.6206	53.9570
KI= 781.01	FE=058	0.0000	0.0000	81.2936	82.7476
KI= 783.21	FE=059	0.0000	0.0000	120.1075	123.5702
KI= 784.41	FE=060	0.0000	0.0000	114.7673	117.1323
KI= 786.91	FE=062	0.0000	0.0000	133.4360	136.5000
KI= 794.41	FE=064	0.0000	0.0000	43.9575	42.5172
KI= 795.71	FE=065	0.0000	0.0000	302.4081	309.9464
8800-n-C8-ANE1	FE=066	.4486	.4789	39.7732	40.6797
KI= 802.51	FE=067	0.0000	0.0000	515.4214	523.6530

TABLE 41 (continued)

KI= 807.11	FE=069	0.0000	0.0000	47.9197	48.7581
KI= 813.61	FE=072	0.0000	0.0000	177.8488	180.9439
KI= 818.21	FE=074	0.0000	0.0000	302.1232	308.0245
KI= 821.31	FE=075	0.0000	0.0000	24.8693	25.2102
KI= 824.21	FE=076	0.0000	0.0000	114.4930	116.6818
KI= 825.71	FE=077	0.0000	0.0000	130.4767	133.3199
KI= 828.11	FE=078	1.5899	1.6519	167.3090	170.7596
KI= 834.41	FE=079	0.0000	0.0000	42.0453	42.6446
KI= 837.01	FE=080	0.0000	0.0000	181.0403	182.7963
KI= 840.81	FE=081	0.0000	0.0000	133.1454	132.0442
KI= 842.71	FE=082	6.4969	6.3881	188.9184	192.1989
KI= 844.21	FE=083	0.0000	0.0000	96.5810	97.9101
KI= 846.21	FE=084	0.0000	0.0000	67.6730	68.7697
KI= 848.21	FE=085	0.0000	0.0000	499.2844	508.1017
KI= 850.91	FE=086	0.0000	0.0000	181.9218	185.9627
KI= 852.81	FE=087	0.0000	0.0000	139.5126	140.1212
KI= 854.41	FE=088	0.0000	0.0000	68.7418	69.7934
KI= 856.11	FE=089	0.0000	0.0000	72.8191	74.6421
KI= 860.01	FE=090	0.0000	0.0000	95.0835	96.7675
KI= 862.21	FE=091	0.0000	0.0000	86.9308	89.3281
KI= 863.81	FE=092	0.0000	0.0000	64.8595	66.2708
KI= 865.01	FE=093	2.0377	2.0588	0.0000	0.0000
KI= 867.41	FE=094	0.0000	0.0000	500.2075	508.0220
KI= 871.21	FE=096	4.9626	5.0237	99.7466	101.4457
KI= 873.11	FE=097	0.0000	0.0000	368.3835	401.7901
KI= 877.11	FE=098	0.0000	0.0000	103.1533	105.7031
KI= 880.01	FE=099	16.7697	17.1166	67.5038	69.4765
KI= 881.61	FE=100	18.7271	19.3197	12.0239	12.5880
KI= 884.51	FE=102	3.7226	5.7696	87.2650	88.4110
KI= 887.41	FE=103	0.0000	0.0000	166.9628	168.3872
KI= 890.91	FE=104	0.0000	0.0000	610.4246	616.4827
KI= 892.61	FE=105	0.0000	79.6836	0.0000	0.0000
KI= 894.61	FE=106	30.5633	32.3302	333.7277	44.0888
KI= 895.91	FE=107	0.0000	0.0000	345.6844	353.8129
KI= 897.61	FE=108	17.6393	16.8931	0.0000	0.0000
8900-n-C9-ANE1	FE=109	7.1181	7.3036	5.4897	5.2262
KI= 901.31	FE=110	75.9025	76.4185	0.0000	0.0000
KI= 910.81	FE=113	0.0000	0.0000	120.8722	122.6044
KI= 913.91	FE=114	40.7995	42.3403	198.7987	201.0268
KI= 915.41	FE=115	0.0000	0.0000	223.4087	225.1623
KI= 917.71	FE=116	23.0977	23.6033	0.0000	0.0000
KI= 920.11	FE=117	83.2229	85.2251	301.2911	306.6199
KI= 922.61	FE=118	26.6992	27.1920	160.4844	162.6042
KI= 924.71	FE=119	34.3257	35.1634	78.5568	79.7000
KI= 929.11	FE=120	58.7111	59.9347	134.6703	136.5026
KI= 933.51	FE=122	64.1280	65.2992	204.2651	207.0092
KI= 939.41	FE=123	22.8905	51.7773	111.1927	113.0282
KI= 941.01	FE=124	0.0000	104.4522	63.8372	63.4971
KI= 945.31	FE=125	19.0836	40.1858	243.2561	247.0506
KI= 947.41	FE=126	30.0107	47.0707	73.1079	75.5284
KI= 952.01	FE=127	166.2975	168.8043	159.3254	161.3697
KI= 953.51	FE=128	133.6872	136.2644	130.2785	132.9926
KI= 955.81	FE=129	56.1620	56.8660	35.4759	36.4888
KI= 956.81	FE=130	30.7685	31.2674	0.0000	0.0000
KI= 960.51	FE=131	133.9507	134.5133	230.1810	230.8479
KI= 962.11	FE=132	78.9695	80.7827	120.9496	122.7255
KI= 964.71	FE=133	167.6910	170.4365	87.3071	88.4943
KI= 966.11	FE=134	0.0000	0.0000	1236.9866	1255.4573
KI= 967.41	FE=135	277.2258	281.8304	0.0000	0.0000
KI= 970.81	FE=136	156.2007	159.3402	116.9525	118.3748
KI= 972.71	FE=137	100.2609	88.0021	66.2529	66.2922

TABLE 41 (continued)

KI= 974.91	FE=138	0.0000	177.7088	179.6332	184.6353
KI= 976.91	FE=139	234.7798	239.1967	249.5759	252.5971
KI= 979.21	FE=140	229.9431	152.5695	268.3970	272.7281
KI= 980.21	FE=141	0.0000	284.4039	0.0000	0.0000
KI= 981.71	FE=142	272.0179	275.9985	191.2700	191.4857
KI= 983.31	FE=143	496.4562	500.4154	258.1896	261.9860
KI= 986.21	FE=144	58.9176	60.0542	66.8487	67.6818
KI= 989.01	FE=145	224.0861	278.1252	202.8588	206.2749
KI= 993.51	FE=146	295.2955	300.4672	215.0939	218.1119
KI= 995.31	FE=147	251.9151	257.2084	222.2484	229.9163
KI= 996.81	FE=148	442.0823	451.0300	214.1092	212.5134
\$1000-n-C10-ANE	FE=149	93.5079	95.3868	186.8558	189.2174
KI=1003.91	FE=150	277.3352	282.9988	195.3749	198.5183
KI=1007.01	FE=151	71.4187	278.3283	98.3261	94.8423
KI=1013.91	FE=152	133.3441	135.5695	105.4850	106.5827
KI=1017.01	FE=153	170.9253	174.6272	141.5012	141.6066
KI=1019.31	FE=154	0.0000	0.0000	194.4081	199.3687
KI=1020.11	FE=155	357.6938	362.8050	59.8542	59.5408
KI=1022.91	FE=156	155.6755	158.1335	273.5941	276.6234
KI=1025.81	FE=157	290.9717	296.6996	179.1457	181.1508
KI=1028.41	FE=158	449.6867	456.2984	226.5058	226.4226
KI=1031.61	FE=159	463.5812	468.4179	357.4182	360.7443
KI=1033.41	FE=160	0.0000	0.0000	496.4687	487.7562
KI=1034.61	FE=161	657.6287	681.1029	265.9395	272.8495
KI=1036.61	FE=162	398.0389	387.3900	151.4480	137.0140
KI=1038.51	FE=163	326.7611	332.5353	291.5289	289.6547
KI=1040.61	FE=164	602.5830	621.0210	249.8564	232.8753
KI=1043.21	FE=165	346.4476	354.0015	420.0885	418.4224
KI=1044.71	FE=166	172.0210	169.8374	0.0000	0.0000
KI=1046.41	FE=167	255.1053	259.8392	225.9807	225.2828
KI=1049.41	FE=168	175.4765	174.7965	86.3826	83.3979
KI=1050.61	FE=169	505.7249	518.4969	164.2018	163.1752
KI=1053.81	FE=170	215.6847	222.5934	170.1055	165.1499
KI=1055.31	FE=171	277.6418	263.2574	0.0000	0.0000
KI=1057.91	FE=173	440.9423	449.4567	200.8591	194.1103
KI=1060.81	FE=174	281.3918	286.2934	123.8300	121.9590
KI=1064.61	FE=175	311.9959	317.9009	103.0528	102.3775
KI=1066.21	FE=176	268.3529	273.2510	136.4689	122.9555
KI=1070.61	FE=177	275.7620	280.8041	95.6896	92.9759
KI=1072.81	FE=178	217.4911	219.7342	107.9004	105.5584
KI=1079.01	FE=179	168.2636	167.9342	152.7303	141.1013
KI=1081.61	FE=180	372.4515	380.7800	265.6362	210.8014
KI=1084.31	FE=181	362.6908	358.7743	148.9925	89.0810
KI=1087.21	FE=182	502.9338	511.3722	473.1085	295.4389
KI=1089.41	FE=183	241.2458	247.5601	269.0016	107.1057
KI=1090.81	FE=184	326.6829	318.8914	253.8267	50.7720
KI=1093.81	FE=185	741.4221	739.2897	569.6646	244.1429
KI=1096.01	FE=186	244.6023	242.6760	273.2672	207.9078
\$1100-n-C11-ANE	FE=187	181.8126	184.1165	223.4999	219.8126
KI=1101.71	FE=188	512.6702	479.9446	0.0000	0.0000
KI=1104.41	FE=189	446.4226	433.5345	372.1315	271.1046
KI=1106.61	FE=190	0.0000	0.0000	607.4066	365.3271
KI=1108.41	FE=191	183.0274	174.6034	68.3922	43.5608
KI=1110.31	FE=192	496.6537	461.8488	498.5757	378.8887
KI=1112.61	FE=193	226.9190	223.9511	65.4526	50.4977
KI=1115.81	FE=194	29.9839	0.0000	164.6954	140.7119
KI=1117.71	FE=195	238.1029	249.0991	222.1413	188.8352
KI=1119.71	FE=196	1040.9072	964.8236	431.0935	218.2625
KI=1123.41	FE=198	911.5631	874.0983	548.8438	414.9384
KI=1127.01	FE=199	361.3383	353.9296	262.1313	262.9597
KI=1129.41	FE=200	569.6880	543.6482	225.7109	206.0271

TABLE 41 (continued)

KI=1133.71	FE=202	611.1849	1621.0444	398.0138	0.0000
KI=1135.01	FE=203	674.2262	674.0991	401.6301	531.9911
KI=1137.11	FE=204	494.5999	415.8931	235.8172	182.4441
KI=1139.71	FE=205	0.0000	0.0000	161.6391	155.8688
KI=1141.01	FE=206	1400.8330	1380.8081	294.1745	277.1594
KI=1144.01	FE=207	242.5019	223.9218	138.2537	122.5851
KI=1148.31	FE=208	716.1937	700.7021	252.7027	238.7446
KI=1149.81	FE=209	284.2750	263.5247	249.7500	224.9076
KI=1152.61	FE=210	950.1881	938.4022	328.3354	322.8500
KI=1155.01	FE=211	377.1876	388.1497	263.1689	275.2217
KI=1156.11	FE=212	332.2770	315.5255	156.5737	154.3527
KI=1158.01	FE=213	345.1902	292.0789	76.7203	0.0000
KI=1159.81	FE=214	290.6265	281.7851	135.5067	133.3057
KI=1161.81	FE=215	501.8546	466.9966	170.9879	160.4862
KI=1164.21	FE=216	262.3956	251.3191	96.7286	95.3102
KI=1170.41	FE=217	292.2410	276.4031	155.2692	155.7836
KI=1175.91	FE=219	629.7206	553.7701	296.8935	260.3931
KI=1179.71	FE=220	684.3041	661.5487	424.0643	389.7999
KI=1181.41	FE=221	413.1667	388.2349	184.5156	171.2654
KI=1185.31	FE=222	318.4133	293.5298	126.5207	117.8656
KI=1189.61	FE=223	532.3239	495.1505	289.3844	222.7053
KI=1191.51	FE=224	167.4948	144.8211	0.0000	77.6960
KI=1193.91	FE=225	148.1057	151.9948	0.0000	29.4582
KI=1195.41	FE=226	439.9818	257.6992	0.0000	0.0000
01200-n-C12-ANE	FE=227	158.4221	155.9386	210.8797	212.5552
KI=1203.41	FE=228	216.0504	132.6748	157.1667	159.8232
KI=1205.61	FE=229	996.5162	816.0404	499.9642	536.8192
KI=1207.21	FE=230	206.9473	0.0000	0.0000	0.0000
KI=1210.91	FE=231	324.9187	213.2389	81.0387	97.3728
KI=1214.21	FE=232	223.7257	202.3756	315.0597	322.9749
KI=1218.21	FE=233	739.2338	614.2266	151.1357	213.9297
KI=1221.71	FE=235	590.2454	518.8450	185.1764	308.6202
KI=1224.31	FE=236	446.5263	385.1838	82.4653	266.7960
KI=1227.81	FE=237	369.9081	356.6024	68.9156	106.5629
KI=1233.91	FE=238	206.5526	206.0570	95.2864	95.7348
KI=1238.61	FE=239	256.8872	256.5330	130.3922	128.8670
KI=1241.71	FE=240	837.5380	846.1561	205.2395	203.0648
KI=1245.41	FE=241	168.0789	170.6631	278.8321	273.1179
KI=1248.51	FE=242	411.2155	475.2685	253.3878	245.4510
KI=1252.81	FE=243	250.7031	257.5764	109.3860	102.9765
KI=1254.81	FE=244	366.2462	375.3734	94.6587	100.5343
KI=1259.31	FE=245	217.9283	262.3029	154.4438	148.4891
KI=1264.01	FE=246	226.1061	232.2580	94.3709	88.9754
KI=1267.61	FE=247	225.0036	239.1742	108.6440	94.8815
KI=1270.21	FE=248	231.9533	240.6501	83.5661	77.5605
KI=1273.11	FE=249	135.6945	140.3027	220.8109	218.2846
KI=1276.11	FE=250	0.0000	209.7274	165.8129	0.0000
KI=1277.51	FE=251	0.0000	213.4627	187.0396	285.2499
KI=1282.71	FE=253	185.6061	215.8401	90.4389	72.8487
KI=1285.61	FE=254	279.7158	368.1877	243.7707	180.9703
KI=1288.31	FE=255	1114.1006	1399.2009	558.2465	466.0545
KI=1294.21	FE=256	510.5540	610.7222	369.0823	336.6581
01300-n-C13-ANE	FE=257	110.5105	113.8401	133.0378	132.9014
KI=1304.41	FE=258	363.1596	401.5261	164.4687	164.4526
KI=1309.61	FE=259	422.5758	352.7031	366.4587	368.6857
KI=1311.51	FE=260	284.6990	126.5658	94.0362	93.1810
KI=1318.01	FE=262	261.6342	164.5551	143.3133	112.8532
KI=1323.11	FE=263	497.4471	373.0754	70.9795	72.0599
KI=1328.01	FE=264	274.0535	274.4915	151.3007	150.6200
KI=1333.41	FE=265	494.6061	502.1610	145.1064	147.0062
KI=1338.41	FE=266	253.0753	268.2269	106.8068	102.5156

TABLE 41 (Concluded)

KI=1342.21	FE=267	226.5023	265.8231	144.3251	125.7357
KI=1344.51	FE=268	91.0222	0.0000	0.0000	0.0000
KI=1347.51	FE=269	97.2062	464.4941	138.8222	139.0303
KI=1351.11	FE=270	362.3433	413.1459	95.0756	94.5277
KI=1354.01	FE=271	305.4872	350.6654	88.6292	88.7868
KI=1358.91	FE=272	308.3878	338.1594	114.6494	112.6719
KI=1364.01	FE=273	155.7729	161.5831	56.7441	56.2427
KI=1370.31	FE=274	254.4925	252.3647	70.7462	70.1907
KI=1376.71	FE=275	52.0782	45.7924	157.3311	157.5302
KI=1383.01	FE=276	600.6512	539.3839	120.5714	118.4553
KI=1388.61	FE=277	180.3103	184.5255	117.8562	119.2250
KI=1393.41	FE=278	126.9735	128.9358	36.7055	36.6555
91400-n-C14-ANE	FE=279	107.3566	108.5723	107.2319	107.0207
KI=1404.01	FE=280	274.5074	277.3241	176.9204	176.2806
KI=1411.11	FE=282	18.3697	24.9090	28.4426	28.8293
KI=1413.61	FE=283	1051.8000	77.0471	0.0000	0.0000
KI=1422.01	FE=285	510.9456	532.9471	0.0000	0.0000
KI=1427.21	FE=286	204.8286	213.7360	0.0000	0.0000
KI=1434.11	FE=288	853.4822	912.3998	358.6903	350.8859
KI=1443.21	FE=289	145.6110	231.6765	69.4066	68.5541
KI=1446.11	FE=290	288.5048	410.6580	105.3490	103.2865
KI=1450.51	FE=291	246.2227	267.7372	0.0000	0.0000
KI=1453.41	FE=292	605.6945	644.6610	71.6014	67.8626
KI=1458.71	FE=293	436.5405	456.4143	144.7348	144.6522
KI=1462.71	FE=294	142.7497	155.8916	191.7668	197.7941
KI=1470.71	FE=295	232.3699	347.5460	138.9931	157.8968
91500-n-C15-ANE	FE=296	269.6497	272.4917	159.6283	160.2794
91600-n-C16-ANE	FE=297	1108.1042	1120.0979	432.8852	438.8574
9ANTH-d10(1S)(KI=1772)		10.0000	10.0000	10.0000	10.0000
92118-(IMPURITY #3)		97.6665	92.5373	151.1007	142.0276
TOTAL CONCENTRATION		54361.2500	55232.4140	40760.7110	38588.7340
CONC. NAMED PEAKS (% REL.)		5.428E+04	5.512E+04	4.071E+04	3.854E+04
TOTAL CONC(% REL.)		5.436E+04	5.523E+04	4.076E+04	3.859E+04
% CONC. NAMED VS. TOTAL		99.85858	99.79561	99.87442	99.87294
NO. OF NAMED PEAKS		178	181	237	237
TOTAL NO. OF PEAKS		236	237	269	271
% NAMED VS. TOTAL PEAKS		75.42374	76.37131	88.10410	87.45387

TABLE 42. STATISTICAL SURVEY OF THE CONCENTRATION (in mg/ml) OF NAMED FEATURES IN DUPLICATE ANALYSES OF A SHALE-DERIVED JP-4 FUEL

STATISTICAL SUMMARY OF MH11 DATA BASE

CONSISTING OF 2 SAMPLES  
CONCENTRATION (mg/ml)

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	STANDARD DEVIATION	NUMBER OF SAMPLES
8500-n-C5-ANEI	FE=005	4.15E-01	3.08E-02	2.18E-02	5.24E+00	2
CH2CL2 SOLVENT		0.00E+00	0.00E+00	0.00E+00	1.70E+38	2
KI= 349.71	FE=010	1.21E-01				1
KI= 352.41	FE=011	1.23E-01				1
IMPURITY #1(KI= 558.6)		1.32E-01	1.18E-02	8.36E-03	6.34E+00	2
KI= 360.41	FE=012	2.00E+00	6.15E-02	4.35E-02	2.17E+00	2
KI= 377.31	FE=013	1.23E+00	4.83E-02	3.42E-02	2.78E+00	2
8600-n-C6-ANEI	FE=014	3.78E+00	1.23E-01	8.73E-02	2.31E+00	2
KI= 624.81	FE=018	1.71E+00	3.45E-02	2.44E-02	1.42E+00	2
KI= 632.41	FE=020	2.80E-01	1.17E-02	8.31E-03	2.97E+00	2
KI= 656.11	FE=022	2.11E+00	6.13E-02	4.33E-02	2.06E+00	2
KI= 658.81	FE=023	4.91E-01	1.27E-02	9.00E-03	1.83E+00	2
KI= 669.01	FE=024	2.15E+00	7.33E-02	5.18E-02	2.41E+00	2
KI= 670.41	FE=025	2.20E+00	7.24E-02	5.12E-02	2.33E+00	2
IMPURITY #2(KI= 674.4)		6.86E-01	9.28E-03	6.56E-03	9.57E-01	2
KI= 677.41	FE=026	5.02E+00	1.40E-01	9.88E-02	1.97E+00	2
KI= 679.81	FE=027	6.56E-01	6.25E-03	4.42E-03	6.73E-01	2
KI= 682.01	FE=028	5.67E-01	7.36E-03	5.21E-03	9.17E-01	2
KI= 685.81	FE=030	1.29E+00	3.86E-02	2.73E-02	2.12E+00	2
8700-n-C7-ANEI	FE=031	8.50E+00	2.47E-01	1.75E-01	2.05E+00	2
KI= 712.51	FE=036	1.01E+01	2.95E-01	2.09E-01	2.06E+00	2
KI= 715.61	FE=037	2.76E-01	1.57E-02	1.11E-02	4.01E+00	2
KI= 725.81	FE=039	1.28E+00	4.27E-02	3.02E-02	2.36E+00	2
KI= 730.01	FE=040	3.47E-01	2.95E-02	2.09E-02	6.01E+00	2
KI= 731.01	FE=041	1.22E+00	2.67E-02	1.89E-02	1.55E+00	2
KI= 733.61	FE=042	7.12E-01	1.10E-02	7.80E-03	1.10E+00	2
KI= 735.01	FE=043	1.14E-01	7.99E-03	3.65E-03	4.95E+00	2
KI= 741.21	FE=044	6.63E-01	1.29E-02	9.15E-03	1.34E+00	2
KI= 743.31	FE=045	1.66E-01	6.24E-03	4.41E-03	2.66E+00	2
KI= 749.91	FE=047	4.90E-01				1
KI= 753.91	FE=048	3.60E-01	1.10E-02	7.81E-03	2.17E+00	2
KI= 757.11	FE=049	1.81E+00	3.93E-02	2.78E-02	1.53E+00	2
KI= 758.81	FE=050	7.48E+00	1.42E-01	1.00E-01	1.34E+00	2
KI= 765.31	FE=052	7.43E+00	1.51E-01	1.06E-01	1.43E+00	2
KI= 766.41	FE=053	2.96E+00	9.33E-02	6.60E-02	2.23E+00	2
KI= 768.81	FE=054	5.74E+00	1.20E-01	8.48E-02	1.48E+00	2
KI= 770.61	FE=055	2.11E+00	4.90E-02	3.47E-02	1.65E+00	2
KI= 772.41	FE=056	4.59E+00	9.40E-02	6.65E-02	1.45E+00	2
KI= 775.21	FE=057	4.48E-01	2.80E-03	1.98E-03	4.42E-01	2
KI= 781.01	FE=058	9.23E-01	1.64E-02	1.16E-02	1.25E+00	2
KI= 783.21	FE=059	8.33E-01	2.37E-02	1.67E-02	2.01E+00	2
KI= 784.41	FE=060	1.47E+00	2.99E-02	2.12E-02	1.44E+00	2
KI= 786.91	FE=062	3.42E+00	7.77E-02	5.49E-02	1.61E+00	2
KI= 794.41	FE=064	2.67E-01	8.89E-03	6.28E-03	2.36E+00	2
KI= 795.71	FE=065	4.45E+00	1.10E-01	7.75E-02	1.74E+00	2
8800-n-C8-ANEI	FE=066	1.03E+01	2.44E-01	1.72E-01	1.59E+00	2
KI= 802.51	FE=067	5.03E-01	7.98E-03	5.64E-03	1.12E+00	2
KI= 807.11	FE=069	1.16E-01	2.01E-03	1.42E-03	1.23E+00	2
KI= 813.61	FE=072	4.94E-01	8.52E-03	6.02E-03	1.22E+00	2
KI= 818.21	FE=074	2.46E+00	4.75E-02	3.36E-02	1.37E+00	2
KI= 821.31	FE=075	5.53E-01	7.53E-03	5.32E-03	9.63E-01	2
KI= 824.21	FE=076	4.23E+00	8.01E-02	5.67E-02	1.34E+00	2
KI= 825.71	FE=077	1.29E+00	2.78E-02	1.96E-02	1.52E+00	2

TABLE 42 (continued)

KI= 828.11	FE=078	9.44E+00	1.93E-01	1.36E-01	1.44E+00	2
KI= 834.41	FE=079	2.66E+00	3.63E-02	2.57E-02	9.67E-01	2
KI= 837.01	FE=080	4.39E-01	4.24E-03	3.00E-03	6.83E-01	2
KI= 840.81	FE=081	2.85E-01	2.32E-03	1.64E-03	5.77E-01	2
KI= 842.71	FE=082	3.93E+00	6.77E-02	4.78E-02	1.22E+00	2
KI= 844.21	FE=083	5.77E-01	7.89E-03	5.58E-03	9.66E-01	2
KI= 846.21	FE=084	1.74E-01	2.79E-03	1.98E-03	1.14E+00	2
KI= 848.21	FE=085	6.59E-01	1.15E-02	8.16E-03	1.24E+00	2
KI= 850.91	FE=086	1.77E-01	3.89E-03	2.75E-03	1.55E+00	2
KI= 852.81	FE=087	2.43E-01	1.06E-03	7.48E-04	3.08E-01	2
KI= 854.41	FE=088	3.18E+00	4.83E-02	3.41E-02	1.07E+00	2
KI= 856.11	FE=089	1.29E+00	3.20E-02	2.26E-02	1.75E+00	2
KI= 860.01	FE=090	1.06E+00	1.86E-02	1.32E-02	1.24E+00	2
KI= 862.21	FE=091	7.27E+00	1.98E-01	1.40E-01	1.92E+00	2
KI= 863.81	FE=092	3.60E+00	7.75E-02	5.48E-02	1.52E+00	2
KI= 867.41	FE=094	1.81E+00	2.80E-02	1.98E-02	1.10E+00	2
KI= 871.21	FE=096	7.25E+00	1.21E-01	8.56E-02	1.18E+00	2
KI= 873.11	FE=097	1.43E+00	1.24E-01	8.74E-02	6.13E+00	2
KI= 877.11	FE=098	4.31E-01	1.05E-02	7.44E-03	1.73E+00	2
KI= 880.01	FE=099	1.97E+00	5.68E-02	4.01E-02	2.04E+00	2
KI= 881.61	FE=100	1.38E-01	6.34E-03	4.48E-03	3.24E+00	2
KI= 884.51	FE=102	3.17E+00	4.14E-02	2.93E-02	9.23E-01	2
KI= 887.41	FE=103	5.08E-01	1.04E-02	7.38E-03	1.45E+00	2
KI= 890.91	FE=104	1.66E+00	1.64E-02	1.16E-02	6.98E-01	2
KI= 894.61	FE=106	8.05E-01	1.23E+00	8.73E-01	1.08E+02	2
KI= 895.91	FE=107	1.46E+00	3.40E-02	2.40E-02	1.64E+00	2
8900-n-C9-ANEI	FE=109	8.65E-01	4.25E-02	3.01E-02	3.48E+00	2
KI= 910.81	FE=113	8.63E-01	1.23E-02	8.68E-03	1.01E+00	2
KI= 913.91	FE=114	7.94E-01	8.85E-03	6.26E-03	7.88E-01	2
KI= 915.41	FE=115	6.66E-01	5.21E-03	3.68E-03	5.53E-01	2
KI= 920.11	FE=117	1.43E+00	2.50E-02	1.77E-02	1.24E+00	2
KI= 922.61	FE=118	3.49E+00	4.58E-02	3.24E-02	9.28E-01	2
KI= 924.71	FE=119	9.47E-01	1.37E-02	9.68E-03	1.02E+00	2
KI= 929.11	FE=120	2.39E+00	3.23E-02	2.28E-02	9.56E-01	2
KI= 933.51	FE=122	7.62E+00	1.02E-01	7.19E-02	9.44E-01	2
KI= 939.41	FE=123	2.80E+00	4.58E-02	3.24E-02	1.16E+00	2
KI= 941.01	FE=124	2.06E-01	1.10E-03	7.78E-04	3.78E-01	2
KI= 945.31	FE=125	3.27E+00	5.06E-02	3.58E-02	1.09E+00	2
KI= 947.41	FE=126	9.26E-01	3.02E-02	2.13E-02	2.30E+00	2
KI= 952.01	FE=127	1.33E+00	1.70E-02	1.20E-02	9.01E-01	2
KI= 953.51	FE=128	1.96E+00	4.03E-02	2.85E-02	1.46E+00	2
KI= 955.81	FE=129	1.49E+00	4.20E-02	2.97E-02	1.99E+00	2
KI= 960.51	FE=131	2.10E+00	6.08E-03	4.30E-03	2.05E-01	2
KI= 962.11	FE=132	5.64E+00	8.22E-02	5.81E-02	1.03E+00	2
KI= 964.71	FE=133	2.21E+00	2.99E-02	2.11E-02	9.55E-01	2
KI= 966.11	FE=134	4.21E+00	6.24E-02	4.41E-02	1.05E+00	2
KI= 970.81	FE=136	2.74E+00	3.32E-02	2.35E-02	8.55E-01	2
KI= 972.71	FE=137	1.04E+00	6.14E-04	4.34E-04	4.19E-02	2
KI= 974.91	FE=138	2.31E-01	6.34E-03	4.48E-03	1.94E+00	2
KI= 976.91	FE=139	3.72E+00	4.48E-02	3.16E-02	8.51E-01	2
KI= 979.21	FE=140	3.34E+00	5.35E-02	3.78E-02	1.13E+00	2
KI= 981.71	FE=142	1.3E+00	1.16E-03	8.19E-04	7.97E-02	2
KI= 983.31	FE=143	5.0E-01	8.52E-03	6.02E-03	1.03E+00	2
KI= 986.21	FE=144	4.0E+00	5.94E-02	4.20E-02	8.76E-01	2
KI= 989.01	FE=145	1.0E+00	2.84E-02	2.01E-02	1.18E+00	2
KI= 993.51	FE=146	1.1E+00	2.55E-02	1.81E-02	9.85E-01	2
KI= 995.31	FE=147	5.43E-01	1.84E-02	1.30E-02	2.40E+00	2
KI= 996.81	FE=148	4.91E-01	3.67E-03	2.60E-03	5.29E-01	2
81000-n-C10-ANEI	FE=149	2.44E+01	3.06E-01	2.16E-01	8.86E-01	2
KI=1003.91	FE=150	1.35E+00	2.15E-02	1.52E-02	1.13E+00	2
KI=1009.01	FE=151	1.74E-01	6.27E-03	4.43E-03	2.55E+00	2



TABLE 42 (continued)

KI=1013.91	FE=152	3.78E+00	3.91E-02	2.74E-02	7.32E-01	2
KI=1017.01	FE=153	1.86E+00	1.38E-03	9.76E-04	5.27E-02	2
KI=1019.31	FE=154	9.77E-01	2.46E-02	1.74E-02	1.78E+00	2
KI=1020.11	FE=155	5.59E-01	2.94E-03	2.08E-03	3.71E-01	2
KI=1022.91	FE=156	8.01E+00	8.82E-02	6.24E-02	7.79E-01	2
KI=1025.81	FE=157	3.79E+00	4.22E-02	2.98E-02	7.87E-01	2
KI=1028.41	FE=158	3.02E+00	1.11E-03	7.85E-04	2.60E-02	2
KI=1031.61	FE=159	2.84E+00	2.63E-02	1.86E-02	6.55E-01	2
KI=1033.41	FE=160	1.61E+00	2.85E-02	2.02E-02	1.25E+00	2
KI=1034.61	FE=161	1.79E+00	4.58E-02	3.24E-02	1.81E+00	2
KI=1036.61	FE=162	4.23E-01	4.23E-02	2.99E-02	7.08E+00	2
KI=1038.51	FE=163	2.13E+00	1.37E-02	9.70E-03	4.56E-01	2
KI=1040.61	FE=164	4.05E-01	2.85E-02	2.01E-02	4.97E+00	2
KI=1043.21	FE=165	5.38E+00	2.14E-02	1.51E-02	2.81E-01	2
KI=1046.41	FE=167	4.59E+00	1.42E-02	1.00E-02	2.19E-01	2
KI=1049.41	FE=168	6.31E-01	2.22E-02	1.57E-02	2.49E+00	2
KI=1050.61	FE=169	1.95E+00	1.22E-02	8.64E-03	4.43E-01	2
KI=1053.81	FE=170	2.73E+00	8.08E-02	5.71E-02	2.09E+00	2
KI=1057.91	FE=173	2.64E+00	9.02E-02	6.38E-02	2.42E+00	2
KI=1060.81	FE=174	2.60E+00	3.96E-02	2.80E-02	1.06E+00	2
KI=1064.61	FE=175	2.54E+00	1.67E-02	1.18E-02	4.65E-01	2
KI=1066.21	FE=176	7.88E-01	8.21E-02	5.80E-02	7.37E+00	2
KI=1070.61	FE=177	3.04E+00	8.75E-02	6.19E-02	2.03E+00	2
KI=1072.81	FE=178	1.93E+00	4.24E-02	3.00E-02	1.55E+00	2
KI=1079.01	FE=179	4.54E+00	3.60E-01	2.54E-01	5.60E+00	2
KI=1081.61	FE=180	1.97E+00	4.55E-01	3.21E-01	1.63E+01	2
KI=1084.31	FE=181	1.15E+00	5.78E-01	4.09E-01	3.56E+01	2
KI=1087.21	FE=182	2.28E+00	1.05E+00	7.46E-01	3.27E+01	2
KI=1089.41	FE=183	8.57E-01	7.37E-01	5.21E-01	6.09E+01	2
KI=1090.81	FE=184	7.74E-01	1.03E+00	7.29E-01	9.43E+01	2
KI=1093.81	FE=185	1.01E+00	8.06E-01	5.70E-01	5.66E+01	2
KI=1096.01	FE=186	2.21E+00	6.00E-01	4.24E-01	1.92E+01	2
1100-n-C11-ANE	FE=187	3.42E+01	5.69E-01	4.03E-01	1.18E+00	2
KI=1104.41	FE=189	1.55E+00	4.86E-01	3.43E-01	2.22E+01	2
KI=1106.61	FE=190	5.24E-01	2.60E-01	1.84E-01	3.51E+01	2
KI=1108.41	FE=191	5.23E-01	2.32E-01	1.64E-01	3.14E+01	2
KI=1110.31	FE=192	1.16E+00	3.15E-01	2.23E-01	1.93E+01	2
KI=1112.61	FE=193	1.07E+00	2.75E-01	1.95E-01	1.82E+01	2
KI=1115.81	FE=194	2.51E+00	3.95E-01	2.79E-01	1.11E+01	2
KI=1117.71	FE=195	1.58E+00	2.55E-01	1.81E-01	1.15E+01	2
KI=1119.71	FE=196	3.94E-01	2.58E-01	1.82E-01	4.64E+01	2
KI=1123.41	FE=198	1.48E+00	4.13E-01	2.92E-01	1.96E+01	2
KI=1127.01	FE=199	2.81E+00	2.13E-01	1.51E-01	5.37E+00	2
KI=1129.41	FE=200	3.69E+00	3.37E-01	2.38E-01	6.45E+00	2
KI=1133.71	FE=202	7.49E-01				1
KI=1135.01	FE=203	1.81E+00	5.05E-01	3.57E-01	1.97E+01	2
KI=1137.11	FE=204	5.69E-01	1.45E-01	1.03E-01	1.80E+01	2
KI=1139.71	FE=205	1.68E+00	6.12E-02	4.33E-02	2.57E+00	2
KI=1141.01	FE=206	2.53E+00	1.51E-01	1.07E-01	4.21E+00	2
KI=1144.01	FE=207	2.01E+00	2.42E-01	1.71E-01	8.50E+00	2
KI=1148.31	FE=208	1.88E+00	1.07E-01	7.56E-02	4.02E+00	2
KI=1149.81	FE=209	7.99E-01	8.36E-02	5.91E-02	7.40E+00	2
KI=1152.61	FE=210	4.22E+00	7.12E-02	5.03E-02	1.19E+00	2
KI=1155.01	FE=211	1.91E+00	8.53E-02	6.04E-02	3.17E+00	2
KI=1156.11	FE=212	2.43E+00	3.48E-02	2.46E-02	1.01E+00	2
KI=1158.01	FE=213	1.57E-01				1
KI=1159.81	FE=214	1.97E+00	3.23E-02	2.28E-02	1.16E+00	2
KI=1161.81	FE=215	6.31E-01	4.00E-02	2.83E-02	4.48E+00	2
KI=1164.21	FE=216	2.61E+00	3.86E-02	2.73E-02	1.04E+00	2
KI=1170.41	FE=217	4.10E+00	1.36E-02	9.58E-03	2.34E-01	2
KI=1175.91	FE=219	1.21E+00	1.59E-01	1.12E-01	9.26E+00	2

TABLE 42 (continued)

KI=1179.71	FE=220	2.67E+00	2.25E-01	1.59E-01	5.95E+00	2
KI=1181.41	FE=221	1.52E+00	1.30E-01	9.18E-02	6.03E+00	2
KI=1185.31	FE=222	2.41E+00	1.71E-01	1.21E-01	5.01E+00	2
KI=1189.61	FE=223	2.52E+00	6.56E-01	4.64E-01	1.84E+01	2
KI=1191.51	FE=224	6.35E-01				1
KI=1193.91	FE=225	2.95E-01				1
§1200-n-C12-ANEI	FE=227	2.67E+01	2.12E-01	1.50E-01	5.60E-01	2
KI=1203.41	FE=228	7.11E-01	1.19E-02	8.42E-03	1.19E+00	2
KI=1205.61	FE=229	1.80E+00	1.28E-01	9.05E-02	5.02E+00	2
KI=1210.91	FE=231	6.16E-01	1.13E-01	7.98E-02	1.29E+01	2
KI=1214.21	FE=232	1.25E+01	3.10E-01	2.19E-01	1.75E+00	2
KI=1218.21	FE=233	6.61E-01	2.27E-01	1.61E-01	2.43E+01	2
KI=1221.71	FE=235	8.38E-01	4.19E-01	2.96E-01	3.54E+01	2
KI=1224.31	FE=236	5.43E-01	5.73E-01	4.05E-01	7.46E+01	2
KI=1227.81	FE=237	8.40E-01	3.60E-01	2.55E-01	3.03E+01	2
KI=1233.91	FE=238	1.82E+00	8.53E-03	6.03E-03	3.32E-01	2
KI=1238.61	FE=239	1.53E+00	1.80E-02	1.27E-02	8.32E-01	2
KI=1241.71	FE=240	1.16E+00	1.23E-02	8.73E-03	7.53E-01	2
KI=1245.41	FE=241	1.21E+00	2.50E-02	1.77E-02	1.46E+00	2
KI=1248.51	FE=242	1.97E+00	6.27E-02	4.43E-02	2.25E+00	2
KI=1252.81	FE=243	1.19E+00	7.18E-02	5.08E-02	4.27E+00	2
KI=1254.81	FE=244	1.65E+00	9.93E-02	7.02E-02	4.26E+00	2
KI=1259.31	FE=245	1.97E+00	7.75E-02	5.48E-02	2.78E+00	2
KI=1264.01	FE=246	1.56E+00	9.18E-02	6.49E-02	4.16E+00	2
KI=1267.61	FE=247	6.13E-01	8.30E-02	5.87E-02	9.56E+00	2
KI=1270.21	FE=248	9.17E-01	6.84E-02	4.83E-02	5.27E+00	2
KI=1273.11	FE=249	7.57E+00	8.71E-02	6.16E-02	8.14E-01	2
KI=1276.11	FE=250	2.41E-01				1
KI=1277.51	FE=251	4.13E-01	1.72E-01	1.21E-01	2.94E+01	2
KI=1282.71	FE=253	1.55E+00	3.35E-01	2.37E-01	1.52E+01	2
KI=1285.61	FE=254	7.10E-01	2.10E-01	1.48E-01	2.09E+01	2
KI=1288.31	FE=255	9.01E-01	1.62E-01	1.15E-01	1.27E+01	2
KI=1294.21	FE=256	1.42E+00	1.30E-01	9.20E-02	6.50E+00	2
§1300-n-C13-ANEI	FE=257	1.43E+01	1.47E-02	1.04E-02	7.25E-02	2
KI=1304.41	FE=258	3.86E-01	3.78E-03	2.67E-03	6.92E-03	2
KI=1309.61	FE=259	2.22E+00	1.35E-02	9.53E-03	4.28E-01	2
KI=1311.51	FE=260	4.94E-01	4.52E-03	3.19E-03	6.46E-01	2
KI=1318.01	FE=262	1.68E+00	4.00E-01	2.83E-01	1.68E+01	2
KI=1323.11	FE=263	2.72E-01	4.11E-03	2.91E-03	1.07E+00	2
KI=1328.01	FE=264	6.73E-01	3.03E-03	2.15E-03	3.19E-01	2
KI=1333.41	FE=265	5.80E-01	7.54E-03	5.33E-03	9.20E-01	2
KI=1338.41	FE=266	7.62E-01	3.13E-02	2.21E-02	2.90E+00	2
KI=1342.21	FE=267	3.05E-01	4.19E-02	2.97E-02	7.73E+00	2
KI=1347.51	FE=269	2.08E-01	3.12E-04	2.20E-04	1.06E-01	2
KI=1351.11	FE=270	6.87E-01	3.97E-03	2.81E-03	4.09E-01	2
KI=1354.01	FE=271	3.35E-01	5.96E-04	4.21E-04	1.24E-01	2
KI=1358.91	FE=272	7.83E-01	1.38E-02	9.73E-03	1.24E+00	2
KI=1364.01	FE=273	6.77E-01	6.00E-03	4.25E-03	6.28E-01	2
KI=1370.31	FE=274	4.61E-01	3.64E-03	2.57E-03	5.57E-01	2
KI=1376.71	FE=275	2.80E+00	3.54E-03	2.50E-03	8.95E-02	2
KI=1383.01	FE=276	4.19E-01	7.42E-03	5.24E-03	1.25E+00	2
KI=1388.61	FE=277	3.29E-01	3.80E-03	2.69E-03	8.17E-01	2
KI=1393.41	FE=278	4.25E-01	5.80E-04	4.10E-04	9.64E-02	2
§1400-n-C14-ANEI	FE=279	5.57E+00	1.10E-02	7.77E-03	1.39E-01	2
KI=1404.01	FE=280	4.44E-01	1.61E-03	1.14E-03	2.56E-01	2
KI=1411.11	FE=282	1.95E-01	2.63E-03	1.86E-03	9.55E-01	2
KI=1434.11	FE=288	3.58E-01	7.88E-03	5.57E-03	1.56E+00	2
KI=1443.21	FE=289	1.80E-01	2.22E-03	1.57E-03	8.74E-01	2
KI=1446.11	FE=290	1.27E-01	2.51E-03	1.78E-03	1.40E+00	2
KI=1453.41	FE=292	1.26E-01	6.76E-03	4.78E-03	3.79E+00	2
KI=1458.71	FE=293	3.85E-01	5.51E-03	3.89E-03	1.01E+00	2

TABLE 42 (Concluded)

KI=1462.71	FE=294	2.36E+00	7.30E-02	5.16E-02	2.19E+00	2
KI=1470.71	FE=295	4.05E-01	5.16E-02	3.65E-02	9.00E+00	2
#1500-n-C15-ANEI	FE=296	2.36E+00	9.61E-03	6.80E-03	2.88E-01	2
#1600-n-C16-ANEI	FE=297	1.02E+00	1.40E-02	9.92E-03	9.69E-01	2
#ANTH-d10(1S)(KI=1772)		1.00E+01	0.00E+00	0.00E+00	0.00E+00	2
#2118-(IMPURITY #3)		1.29E+00	7.98E-02	5.64E-02	4.38E+00	2
TOTAL CONCENTRATION		6.01E+02	8.77E+00	6.20E+00	1.03E+00	2

TABLE 43. STATISTICAL SURVEY OF THE CONCENTRATION (in % Rel.) OF NAMED FEATURES IN DUPLICATE ANALYSES OF A SHALE-DERIVED JP-4 FUEL

STATISTICAL SUMMARY OF PH11 DATA BASE

CONSISTING OF 2 SAMPLES  
CONCENTRATION (% REL.)

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	%REL STANDARD DEVIATION	NUMBER OF SAMPLES
\$500-n-C5-ANE:	FE=005	5.15E+00	3.82E-01	2.70E-01	5.24E+00	2
CH2CL2 SOLVENT		0.00E+00	0.00E+00	0.00E+00	1.70E+38	2
KI= 549.71	FE=010	9.10E+00				1
KI= 552.41	FE=011	7.91E+00				1
IMPURITY #1(KI= 558.6)		6.86E+01	7.95E+00	5.62E+00	6.34E+00	2
KI= 560.41	FE=012	2.16E+01	6.62E-01	4.68E-01	2.17E+00	2
KI= 577.31	FE=013	1.91E+01	7.50E-01	5.30E-01	2.78E+00	2
\$600-n-C6-ANE:	FE=014	2.39E+01	7.82E-01	5.53E-01	2.31E+00	2
KI= 624.81	FE=018	2.04E+01	4.11E-01	2.91E-01	1.42E+00	2
KI= 632.41	FE=020	1.72E+01	7.22E-01	5.10E-01	2.97E+00	2
KI= 656.11	FE=022	2.65E+01	7.71E-01	5.46E-01	2.06E+00	2
KI= 659.81	FE=023	1.35E+01	3.49E-01	2.47E-01	1.83E+00	2
KI= 669.01	FE=024	4.63E+01	1.58E+00	1.12E+00	2.41E+00	2
KI= 670.41	FE=025	1.93E+01	6.37E-01	4.50E-01	2.33E+00	2
IMPURITY #2(KI= 674.4)		9.15E+01	1.24E+00	6.75E-01	9.57E-01	2
KI= 677.41	FE=026	3.66E+01	1.02E+00	7.21E-01	1.97E+00	2
KI= 679.81	FE=027	2.68E+01	2.56E-01	1.81E-01	6.73E-01	2
KI= 682.01	FE=028	2.42E+01	3.14E-01	2.22E-01	9.18E-01	2
KI= 685.81	FE=030	9.75E+01	2.92E+00	2.07E+00	2.12E+00	2
\$700-n-C7-ANE:	FE=031	3.40E+01	9.87E-01	6.98E-01	2.05E+00	2
KI= 712.51	FE=036	6.41E+01	1.87E+00	1.32E+00	2.06E+00	2
KI= 715.61	FE=037	1.93E+01	1.09E+00	7.74E-01	4.01E+00	2
KI= 725.81	FE=039	7.95E+01	2.66E+00	1.88E+00	2.36E+00	2
KI= 730.01	FE=040	1.46E+01	1.24E+00	8.76E-01	6.01E+00	2
KI= 731.01	FE=041	3.01E+01	6.62E-01	4.68E-01	1.55E+00	2
KI= 733.61	FE=042	4.45E+01	6.89E-01	4.87E-01	1.10E+00	2
KI= 735.01	FE=043	7.89E+00	5.52E-01	3.90E-01	4.95E+00	2
KI= 741.21	FE=044	4.42E+01	8.38E-01	5.92E-01	1.34E+00	2
KI= 743.31	FE=045	3.37E+01	1.27E+00	6.97E-01	2.66E+00	2
KI= 749.91	FE=047	3.71E+02				1
KI= 753.91	FE=048	6.08E+01	1.84E+00	1.32E+00	2.17E+00	2
KI= 757.11	FE=049	4.26E+01	9.23E-01	6.53E-01	1.53E+00	2
KI= 758.81	FE=050	8.84E+01	1.68E+00	1.19E+00	1.34E+00	2
KI= 765.31	FE=052	4.18E+01	8.47E-01	5.99E-01	1.43E+00	2
KI= 766.41	FE=053	4.25E+01	1.34E+00	9.48E-01	2.23E+00	2
KI= 768.81	FE=054	1.24E+02	2.59E+00	1.83E+00	1.48E+00	2
KI= 770.61	FE=055	8.43E+01	1.96E+00	1.39E+00	1.65E+00	2
KI= 772.41	FE=056	2.27E+01	4.65E-01	3.29E-01	1.45E+00	2
KI= 775.21	FE=057	5.38E+01	3.36E-01	2.38E-01	4.42E-01	2
KI= 781.01	FE=058	8.20E+01	1.45E+00	1.03E+00	1.25E+00	2
KI= 783.21	FE=059	1.22E+02	3.46E+00	2.45E+00	2.01E+00	2
KI= 784.41	FE=060	1.16E+02	2.36E+00	1.67E+00	1.44E+00	2
KI= 786.91	FE=062	1.35E+02	3.06E+00	2.17E+00	1.61E+00	2
KI= 794.41	FE=064	4.32E+01	1.44E+00	1.02E+00	2.36E+00	2
KI= 795.71	FE=065	3.06E+02	7.54E+00	5.33E+00	1.74E+00	2
\$800-n-C8-ANE:	FE=066	4.02E+01	9.06E-01	6.41E-01	1.59E+00	2
KI= 802.51	FE=067	5.20E+02	8.23E+00	5.82E+00	1.12E+00	2
KI= 807.11	FE=069	4.83E+01	8.38E-01	5.93E-01	1.23E+00	2
KI= 813.61	FE=072	1.79E+02	3.10E+00	2.19E+00	1.22E+00	2
KI= 818.21	FE=074	3.05E+02	5.90E+00	4.17E+00	1.37E+00	2
KI= 821.31	FE=075	2.50E+01	3.41E-01	2.41E-01	9.63E-01	2
KI= 824.21	FE=076	1.16E+02	2.19E+00	1.55E+00	1.34E+00	2
KI= 825.71	FE=077	1.32E+02	2.84E+00	2.01E+00	1.52E+00	2

TABLE 43 (continued)

KI= 828.11	FE=078	1.69E+02	3.45E+00	2.44E+00	1.44E+00	2
KI= 834.41	FE=079	4.24E+01	5.79E-01	4.10E-01	9.67E-01	2
KI= 837.01	FE=080	1.82E+02	1.76E+00	1.24E+00	6.83E-01	2
KI= 840.81	FE=081	1.33E+02	1.06E+00	7.65E-01	5.77E-01	2
KI= 842.71	FE=082	1.91E+02	3.28E+00	2.32E+00	1.22E+00	2
KI= 844.21	FE=083	9.72E+01	1.33E+00	9.40E-01	9.66E-01	2
KI= 846.21	FE=084	5.82E+01	1.10E+00	7.76E-01	1.14E+00	2
KI= 848.21	FE=085	5.04E+02	8.82E+00	6.23E+00	1.24E+00	2
KI= 850.91	FE=086	1.84E+02	4.04E+00	2.84E+00	1.53E+00	2
KI= 852.81	FE=087	1.40E+02	6.09E-01	4.30E-01	3.08E-01	2
KI= 854.41	FE=088	6.93E+01	1.05E+00	7.44E-01	1.07E+00	2
KI= 856.11	FE=089	7.37E+01	1.82E+00	1.29E+00	1.73E+00	2
KI= 860.01	FE=090	9.59E+01	1.68E+00	1.19E+00	1.24E+00	2
KI= 862.21	FE=091	8.81E+01	2.40E+00	1.70E+00	1.92E+00	2
KI= 863.81	FE=092	6.56E+01	1.41E+00	9.98E-01	1.52E+00	2
KI= 867.41	FE=094	5.04E+02	7.81E+00	5.53E+00	1.10E+00	2
KI= 871.21	FE=096	1.01E+02	1.68E+00	1.19E+00	1.18E+00	2
KI= 873.11	FE=097	3.85E+02	3.34E+01	2.36E+01	6.13E+00	2
KI= 877.11	FE=098	1.04E+02	2.55E+00	1.80E+00	1.73E+00	2
KI= 880.01	FE=099	6.85E+01	1.97E+00	1.39E+00	2.04E+00	2
KI= 881.61	FE=100	1.23E+01	5.64E-01	3.99E-01	3.24E+00	2
KI= 884.51	FE=102	8.78E+01	1.15E+00	8.10E-01	9.23E-01	2
KI= 887.41	FE=103	1.67E+02	3.42E+00	2.42E+00	1.45E+00	2
KI= 890.91	FE=104	6.12E+02	6.06E+00	4.28E+00	6.98E-01	2
KI= 894.61	FE=106	1.89E+02	2.90E+02	2.05E+02	1.08E+02	2
KI= 895.91	FE=107	3.50E+02	8.13E+00	5.75E+00	1.64E+00	2
8900-n-C9-ANE1	FE=109	5.36E+00	2.63E-01	1.84E-01	3.48E+00	2
KI= 910.81	FE=113	1.22E+02	1.73E+00	1.27E+00	1.01E+00	2
KI= 913.91	FE=114	2.00E+02	2.23E+00	1.58E+00	7.88E-01	2
KI= 915.41	FE=115	2.24E+02	1.75E+00	1.24E+00	5.53E-01	2
KI= 920.11	FE=117	3.04E+02	5.33E+00	3.77E+00	1.24E+00	2
KI= 922.61	FE=118	1.62E+02	2.12E+00	1.50E+00	9.28E-01	2
KI= 924.71	FE=119	7.91E+01	1.14E+00	8.08E-01	1.02E+00	2
KI= 929.11	FE=120	1.36E+02	1.83E+00	1.30E+00	9.56E-01	2
KI= 933.51	FE=122	2.06E+02	2.74E+00	1.94E+00	9.44E-01	2
KI= 939.41	FE=123	1.12E+02	1.84E+00	1.30E+00	1.16E+00	2
KI= 941.01	FE=124	6.37E+01	3.40E-01	2.40E-01	3.78E-01	2
KI= 945.31	FE=125	2.45E+02	3.79E+00	2.68E+00	1.09E+00	2
KI= 947.41	FE=126	7.43E+01	2.42E+00	1.71E+00	2.30E+00	2
KI= 952.01	FE=127	1.60E+02	2.04E+00	1.45E+00	9.01E-01	2
KI= 953.51	FE=128	1.32E+02	2.71E+00	1.92E+00	1.44E+00	2
KI= 955.81	FE=129	3.60E+01	1.01E+00	7.16E-01	1.99E+00	2
KI= 960.51	FE=131	2.31E+02	6.67E-01	4.72E-01	2.05E-01	2
KI= 962.11	FE=132	1.22E+02	1.78E+00	1.26E+00	1.03E+00	2
KI= 964.71	FE=133	8.79E+01	1.19E+00	8.39E-01	9.55E-01	2
KI= 966.11	FE=134	1.25E+03	1.85E+01	1.31E+01	1.05E+00	2
KI= 970.81	FE=136	1.18E+02	1.42E+00	1.01E+00	8.55E-01	2
KI= 972.71	FE=137	6.63E+01	3.93E-02	2.78E-02	4.19E-02	2
KI= 974.91	FE=138	1.82E+02	5.00E+00	3.54E+00	1.94E+00	2
KI= 976.91	FE=139	2.51E+02	3.02E+00	2.14E+00	8.51E-01	2
KI= 979.21	FE=140	2.71E+02	4.33E+00	3.04E+00	1.13E+00	2
KI= 981.71	FE=142	1.91E+02	2.16E-01	1.53E-01	7.97E-02	2
KI= 983.31	FE=143	2.60E+02	3.80E+00	2.68E+00	1.03E+00	2
KI= 986.21	FE=144	6.73E+01	8.33E-01	5.89E-01	8.76E-01	2
KI= 989.01	FE=145	2.05E+02	3.42E+00	2.42E+00	1.18E+00	2
KI= 993.51	FE=146	2.17E+02	3.02E+00	2.13E+00	9.85E-01	2
KI= 995.31	FE=147	2.26E+02	7.67E+00	5.42E+00	2.40E+00	2
KI= 996.81	FE=148	2.13E+02	1.60E+00	1.13E+00	5.29E-01	2
91000-n-C10-ANE1	FE=149	1.88E+02	2.36E+00	1.67E+00	8.88E-01	2
KI=1003.91	FE=150	1.97E+02	3.14E+00	2.22E+00	1.13E+00	2
KI=1009.01	FE=151	9.64E+01	3.48E+00	2.46E+00	2.55E+00	2

TABLE 43 (continued)

KI=1013.91	FE=152	1.06E+02	1.10E+00	7.76E-01	7.32E-01	2
KI=1017.01	FE=153	1.42E+02	1.05E-01	7.44E-02	5.27E-02	2
KI=1019.31	FE=154	1.97E+02	4.96E+00	3.51E+00	1.78E+00	2
KI=1020.11	FE=155	5.97E+01	3.13E-01	2.22E-01	3.71E-01	2
KI=1022.91	FE=156	2.75E+02	3.03E+00	2.14E+00	7.79E-01	2
KI=1025.81	FE=157	1.80E+02	2.01E+00	1.42E+00	7.87E-01	2
KI=1028.41	FE=158	2.26E+02	8.32E-02	5.88E-02	2.60E-02	2
KI=1031.61	FE=159	3.59E+02	3.33E+00	2.35E+00	6.55E-01	2
KI=1033.41	FE=160	4.92E+02	8.71E+00	6.16E+00	1.25E+00	2
KI=1034.61	FE=161	2.69E+02	6.91E+00	4.89E+00	1.81E+00	2
KI=1036.61	FE=162	1.44E+02	1.44E+01	1.02E+01	7.08E+00	2
KI=1038.51	FE=163	2.91E+02	1.87E+00	1.33E+00	4.56E-01	2
KI=1040.61	FE=164	2.41E+02	1.70E+01	1.20E+01	4.97E+00	2
KI=1043.21	FE=165	4.19E+02	1.67E+00	1.18E+00	2.81E-01	2
KI=1046.41	FE=167	2.26E+02	6.98E-01	4.94E-01	2.19E-01	2
KI=1049.41	FE=168	8.49E+01	2.98E+00	2.11E+00	2.49E+00	2
KI=1050.61	FE=169	1.64E+02	1.03E+00	7.26E-01	4.43E-01	2
KI=1053.81	FE=170	1.68E+02	4.96E+00	3.50E+00	2.09E+00	2
KI=1057.91	FE=173	1.97E+02	6.75E+00	4.77E+00	2.42E+00	2
KI=1060.81	FE=174	1.23E+02	1.87E+00	1.32E+00	1.08E+00	2
KI=1064.61	FE=175	1.03E+02	6.75E-01	4.77E-01	4.65E-01	2
KI=1066.21	FE=176	1.30E+02	1.35E+01	9.56E+00	7.37E+00	2
KI=1070.61	FE=177	9.43E+01	2.71E+00	1.92E+00	2.03E+00	2
KI=1072.81	FE=178	1.07E+02	2.34E+00	1.66E+00	1.55E+00	2
KI=1079.01	FE=179	1.47E+02	1.16E+01	8.22E+00	5.60E+00	2
KI=1081.61	FE=180	2.38E+02	5.48E+01	3.88E+01	1.63E+01	2
KI=1084.31	FE=181	1.19E+02	5.99E+01	4.24E+01	3.56E+01	2
KI=1087.21	FE=182	3.84E+02	1.78E+02	1.26E+02	3.27E+01	2
KI=1089.41	FE=183	1.88E+02	1.62E+02	1.14E+02	6.09E+01	2
KI=1090.81	FE=184	1.52E+02	2.03E+02	1.44E+02	9.43E+01	2
KI=1093.81	FE=185	4.07E+02	3.26E+02	2.30E+02	5.66E+01	2
KI=1096.01	FE=186	2.41E+02	6.54E+01	4.62E+01	1.92E+01	2
81100-n-C11-ANE	FE=187	2.22E+02	3.69E+00	2.61E+00	1.18E+00	2
KI=1104.41	FE=189	3.22E+02	1.01E+02	7.14E+01	2.22E+01	2
KI=1106.61	FE=190	4.87E+02	2.42E+02	1.71E+02	3.51E+01	2
KI=1108.41	FE=191	5.60E+01	2.48E+01	1.74E+01	3.14E+01	2
KI=1110.31	FE=192	4.39E+02	1.20E+02	8.44E+01	1.92E+01	2
KI=1112.61	FE=193	5.80E+01	1.50E+01	1.04E+01	1.82E+01	2
KI=1115.81	FE=194	1.53E+02	2.40E+01	1.70E+01	1.11E+01	2
KI=1117.71	FE=195	2.05E+02	3.33E+01	2.34E+01	1.15E+01	2
KI=1119.71	FE=196	3.25E+02	2.13E+02	1.50E+02	4.64E+01	2
KI=1123.41	FE=198	4.82E+02	1.34E+02	9.47E+01	1.96E+01	2
KI=1127.01	FE=199	2.53E+02	1.92E+01	1.34E+01	5.37E+00	2
KI=1129.41	FE=200	2.16E+02	1.97E+01	1.39E+01	6.45E+00	2
KI=1133.71	FE=202	3.98E+02				1
KI=1135.01	FE=203	4.67E+02	1.30E+02	9.22E+01	1.97E+01	2
KI=1137.11	FE=204	2.09E+02	5.34E+01	3.77E+01	1.80E+01	2
KI=1139.71	FE=205	1.59E+02	5.77E+00	4.08E+00	2.57E+00	2
KI=1141.01	FE=206	2.86E+02	1.70E+01	1.20E+01	4.21E+00	2
KI=1144.01	FE=207	1.30E+02	1.57E+01	1.11E+01	8.50E+00	2
KI=1148.31	FE=208	2.46E+02	1.40E+01	9.87E+00	4.02E+00	2
KI=1149.81	FE=209	2.37E+02	2.48E+01	1.74E+01	7.40E+00	2
KI=1152.61	FE=210	3.26E+02	5.49E+00	3.88E+00	1.19E+00	2
KI=1155.01	FE=211	2.69E+02	1.21E+01	8.52E+00	3.17E+00	2
KI=1156.11	FE=212	1.55E+02	2.22E+00	1.57E+00	1.01E+00	2
KI=1158.01	FE=213	7.67E+01				1
KI=1159.81	FE=214	1.34E+02	2.20E+00	1.54E+00	1.16E+00	2
KI=1161.81	FE=215	1.66E+02	1.05E+01	7.43E+00	4.48E+00	2
KI=1164.21	FE=216	9.60E+01	1.42E+00	1.00E+00	1.04E+00	2
KI=1170.41	FE=217	1.56E+02	5.14E-01	3.64E-01	2.34E-01	2
KI=1175.91	FE=219	2.79E+02	3.65E+01	2.58E+01	9.24E+00	2

TABLE 43 (continued)

KI=1179.71	FE=220	4.07E+02	3.43E+01	2.42E+01	5.95E+00	2
KI=1181.41	FE=221	1.79E+02	1.53E+01	1.03E+01	6.03E+00	2
KI=1185.31	FE=222	1.22E+02	8.66E+00	6.12E+00	5.01E+00	2
KI=1189.61	FE=223	2.56E+02	6.67E+01	4.72E+01	1.04E+01	2
KI=1191.51	FE=224	7.77E+01				1
KI=1193.91	FE=225	2.95E+01				1
*1200-n-C12-ANE	FE=227	2.12E+02	1.68E+00	1.10E+00	5.60E-01	2
KI=1203.41	FE=228	1.53E+02	2.66E+00	1.03E+00	1.19E+00	2
KI=1205.61	FE=229	5.16E+02	3.69E+01	2.81E+01	5.03E+00	2
KI=1210.91	FE=231	8.92E+01	1.63E+01	1.15E+01	1.21E+01	2
KI=1214.21	FE=232	3.19E+02	7.92E+00	5.60E+00	1.71E+00	2
KI=1218.21	FE=233	1.83E+02	6.28E+01	4.44E+01	2.40E+01	2
KI=1221.71	FE=235	2.47E+02	1.23E+02	8.73E+01	3.54E+01	2
KI=1224.31	FE=236	1.75E+02	1.84E+02	1.30E+02	7.46E+01	2
KI=1227.81	FE=237	8.77E+01	3.76E+01	2.66E+01	3.03E+01	2
KI=1233.91	FE=238	9.55E+01	4.40E-01	3.17E-01	3.32E-01	2
KI=1239.61	FE=239	1.30E+02	1.53E+00	1.03E+00	8.32E-01	2
KI=1241.71	FE=240	2.04E+02	2.17E+00	1.54E+00	7.53E-01	2
KI=1245.41	FE=241	2.76E+02	5.71E+00	4.04E+00	1.46E+00	2
KI=1248.51	FE=242	2.49E+02	7.94E+00	5.61E+00	2.23E+00	2
KI=1252.81	FE=243	1.06E+02	6.41E+00	4.53E+00	4.27E+00	2
KI=1254.81	FE=244	9.76E+01	5.08E+00	4.13E+00	4.26E+00	2
KI=1259.31	FE=245	1.51E+02	5.95E+00	4.21E+00	2.73E+00	2
KI=1264.01	FE=246	9.17E+01	5.40E+00	3.36E+00	4.16E+00	2
KI=1267.61	FE=247	1.02E+02	1.38E+01	9.73E+00	9.56E+00	2
KI=1270.21	FE=248	8.06E+01	6.01E+00	4.25E+00	5.27E+00	2
KI=1273.11	FE=249	2.20E+02	2.53E+00	1.79E+00	8.14E-01	2
KI=1276.11	FE=250	1.66E+02				1
KI=1277.51	FE=251	2.36E+02	9.82E+01	6.94E+01	2.94E+01	2
KI=1282.71	FE=253	8.16E+01	1.76E+01	1.24E+01	1.52E+01	2
KI=1285.61	FE=254	2.12E+02	6.28E+01	4.44E+01	2.09E+01	2
KI=1288.31	FE=255	5.12E+02	9.22E+01	6.52E+01	1.27E+01	2
KI=1291.21	FE=256	3.53E+02	3.24E+01	2.29E+01	6.50E+00	2
*1300-n-C13-ANE	FE=257	1.33E+02	1.36E-01	9.63E-02	7.23E-02	2
KI=1304.41	FE=258	1.64E+02	1.61E-02	1.14E-02	6.90E-03	2
KI=1309.61	FE=259	3.68E+02	2.23E+00	1.57E+00	4.20E-01	2
KI=1311.51	FE=260	9.36E+01	8.53E-01	6.05E-01	6.46E-01	2
KI=1318.01	FE=262	1.20E+02	3.05E+01	2.15E+01	1.60E+01	2
KI=1323.11	FE=263	7.15E+01	1.08E+00	7.64E-01	1.07E+00	2
KI=1328.01	FE=264	1.51E+02	6.81E-01	4.81E-01	3.15E-01	2
KI=1333.41	FE=265	1.46E+02	1.90E+00	1.34E+00	9.20E-01	2
KI=1338.41	FE=266	1.05E+02	4.29E+00	3.03E+00	2.90E+00	2
KI=1342.21	FE=267	1.35E+02	1.86E+01	1.31E+01	9.70E+00	2
KI=1347.51	FE=269	1.39E+02	2.03E-01	1.47E-01	1.06E-01	2
KI=1351.11	FE=270	9.40E+01	5.48E-01	3.87E-01	4.02E-01	2
KI=1354.01	FE=271	8.87E+01	1.59E-01	1.11E-01	1.26E-01	2
KI=1358.91	FE=272	1.14E+02	2.00E+00	1.41E+00	1.24E+00	2
KI=1364.01	FE=273	5.65E+01	5.01E-01	3.53E-01	6.20E-01	2
KI=1370.31	FE=274	7.05E+01	5.55E-01	3.93E-01	5.57E-01	2
KI=1376.71	FE=275	1.57E+02	1.99E-01	1.41E-01	8.95E-02	2
KI=1383.01	FE=276	1.20E+02	2.12E+00	1.50E+00	1.23E+00	2
KI=1388.61	FE=277	1.19E+02	1.37E+00	9.68E-01	8.17E-01	2
KI=1393.41	FE=278	3.67E+01	5.00E-02	3.53E-02	9.64E-02	2
*1400-n-C14-ANE	FE=279	1.07E+02	2.11E-01	1.49E-01	1.39E-01	2
KI=1404.01	FE=280	1.77E+02	6.40E-01	4.52E-01	2.56E-01	2
KI=1411.11	FE=282	2.86E+01	3.87E-01	2.73E-01	9.55E-01	2
KI=1434.11	FE=288	3.55E+02	7.80E+00	5.52E+00	1.56E+00	2
KI=1443.21	FE=289	6.90E+01	8.52E-01	6.03E-01	8.74E-01	2
KI=1446.11	FE=290	1.04E+02	2.06E+00	1.46E+00	1.40E+00	2
KI=1453.41	FE=292	6.97E+01	3.74E+00	2.64E+00	3.79E+00	2
KI=1458.71	FE=293	1.46E+02	2.03E+00	1.47E+00	1.01E+00	2

TABLE 43 (Concluded)

KI=1462.71	FE=294	1.95E+02	6.03E+00	4.26E+00	2.19E+00	2
KI=1470.71	FE=295	1.48E+02	1.89E+01	1.34E+01	9.00E+00	2
\$1500-n-C15-ANE	FE=296	1.60E+02	6.51E-01	4.60E-01	2.88E-01	2
\$1600-n-C16-ANE	FE=297	4.36E+02	5.97E+00	4.22E+00	9.69E-01	2
\$ANTH-d10(1S) (KI=1772)		1.00E+01	0.00E+00	0.00E+00	0.00E+00	2
\$2118-(IMPURITY #3)		1.47E+02	9.07E+00	6.42E+00	4.38E+00	2
TOTAL CONCENTRATION		3.97E+04	2.17E+03	1.54E+03	3.87E+00	2



TABLE 44. STATISTICAL SURVEY OF KOVATS INDICES OF NAMED FETURES  
IN DUPLICATE ANALYSES OF A WEALE-DERIVED JP-4 FUEL

STATISTICAL SUMMARY OF MH11 DATA BASE

CONSISTING OF 2 SAMPLES  
RETENTION INDEX (KI)

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	REL STANDARD DEVIATION	NUMBER OF SAMPLES
6500-n-C5-ANE1	FE=005	500.00	0.00E+00	0.00E+00	0.00E+00	2
CH2CL2 SOLVENT		526.80	4.94E-02	3.50E-02	6.64E-03	2
KI= 549.71	FE=010	549.13				1
KI= 552.41	FE=011	551.52				1
IMPURITY 01(KI= 558.6)	FE=012	557.91	4.80E-01	3.40E-01	6.09E-02	2
KI= 560.41	FE=013	559.72	3.63E-01	2.56E-01	4.58E-02	2
KI= 577.31	FE=014	576.85	4.96E-02	3.50E-02	6.08E-03	2
6600-n-C6-ANE1	FE=015	600.00	0.00E+00	0.00E+00	0.00E+00	2
KI= 624.81	FE=016	625.05	1.18E-01	8.32E-02	1.33E-02	2
KI= 632.41	FE=017	632.87	1.36E-01	9.64E-02	1.52E-02	2
KI= 656.11	FE=018	656.56	4.37E-02	3.09E-02	4.71E-03	2
KI= 658.81	FE=019	659.61	7.60E-02	5.38E-02	8.15E-03	2
KI= 669.01	FE=020	669.58	3.43E-02	2.43E-02	3.62E-03	2
KI= 670.41	FE=021	670.84	2.50E-02	1.77E-02	2.64E-03	2
IMPURITY 02(KI= 674.4)	FE=022	673.04	1.07E-02	7.60E-03	1.13E-03	2
KI= 677.41	FE=023	677.91	2.03E-02	1.43E-02	2.11E-03	2
KI= 679.81	FE=024	680.36	1.35E-02	9.38E-03	1.41E-03	2
KI= 682.01	FE=025	682.43	2.44E-03	1.73E-03	2.53E-04	2
KI= 685.81	FE=026	685.13	6.13E-02	4.33E-02	6.32E-03	2
6700-n-C7-ANE1	FE=027	700.00	0.00E+00	0.00E+00	0.00E+00	2
KI= 712.51	FE=028	712.43	5.09E-02	3.60E-02	5.05E-03	2
KI= 715.61	FE=029	715.71	4.36E-02	4.50E-02	6.28E-03	2
KI= 725.81	FE=030	725.44	4.52E-02	3.19E-02	4.40E-03	2
KI= 730.01	FE=031	729.83	5.48E-02	3.88E-02	5.31E-03	2
KI= 731.01	FE=032	730.69	5.87E-02	4.15E-02	5.68E-03	2
KI= 733.61	FE=033	733.31	7.97E-02	5.64E-02	7.69E-03	2
KI= 735.01	FE=034	734.78	1.15E-01	8.15E-02	1.11E-02	2
KI= 741.21	FE=035	740.85	3.19E-02	2.25E-02	3.04E-03	2
KI= 743.31	FE=036	742.86	1.62E-01	1.14E-01	1.54E-02	2
KI= 749.91	FE=037	750.74				1
KI= 753.91	FE=038	753.51	7.93E-02	5.61E-02	7.45E-03	2
KI= 757.11	FE=039	756.74	1.09E-01	7.73E-02	1.02E-02	2
KI= 758.81	FE=040	758.43	1.41E-01	1.00E-01	1.32E-02	2
KI= 765.31	FE=041	764.79	7.30E-02	5.16E-02	6.75E-03	2
KI= 766.41	FE=042	765.96	1.05E-01	7.43E-02	9.70E-03	2
KI= 768.81	FE=043	768.63	9.02E-02	6.38E-02	8.30E-03	2
KI= 770.61	FE=044	770.40	8.41E-02	5.95E-02	7.72E-03	2
KI= 772.41	FE=045	771.98	5.83E-02	4.13E-02	5.34E-03	2
KI= 775.21	FE=046	775.05	7.01E-02	4.95E-02	6.39E-03	2
KI= 781.01	FE=047	781.06	8.06E-02	5.70E-02	7.29E-03	2
KI= 783.21	FE=048	783.22	4.19E-02	2.96E-02	3.78E-03	2
KI= 784.41	FE=049	784.44	4.93E-02	3.49E-02	4.45E-03	2
KI= 786.91	FE=050	787.00	4.33E-02	3.06E-02	3.89E-03	2
KI= 794.41	FE=051	794.78	4.30E-02	3.04E-02	3.82E-03	2
KI= 795.71	FE=052	796.01	2.86E-02	2.02E-02	2.54E-03	2
6800-n-C8-ANE1	FE=053	800.00	0.00E+00	0.00E+00	0.00E+00	2
KI= 802.51	FE=054	801.98	1.68E-02	1.19E-02	1.49E-03	2
KI= 807.11	FE=055	807.25	2.94E-02	2.08E-02	2.58E-03	2
KI= 813.61	FE=056	813.69	2.22E-02	1.57E-02	1.93E-03	2
KI= 818.21	FE=057	818.15	3.13E-02	2.21E-02	2.70E-03	2
KI= 821.31	FE=058	821.38	1.68E-02	1.19E-02	1.45E-03	2
KI= 824.21	FE=059	824.12	1.67E-02	1.18E-02	1.43E-03	2
KI= 825.71	FE=060	825.35	3.45E-02	2.44E-02	2.96E-03	2

TABLE 44 (continued)

KI= 828.11	FE=078	827.95	1.95E-03	1.38E-03	1.67E-04	2
KI= 834.41	FE=079	834.25	2.38E-02	1.68E-02	2.02E-03	2
KI= 837.01	FE=080	836.79	2.08E-02	1.47E-02	1.75E-03	2
KI= 840.81	FE=081	840.44	2.58E-02	1.82E-02	2.17E-03	2
KI= 842.71	FE=082	842.34	9.77E-03	6.91E-03	8.20E-04	2
KI= 844.21	FE=083	843.90	4.88E-04	3.45E-04	4.09E-05	2
KI= 846.21	FE=084	845.90	2.69E-02	1.90E-02	2.24E-03	2
KI= 848.21	FE=085	847.75	2.03E-02	1.43E-02	1.69E-03	2
KI= 850.91	FE=086	850.60	3.30E-02	2.33E-02	2.74E-03	2
KI= 852.81	FE=087	852.32	4.88E-04	3.45E-04	4.05E-05	2
KI= 854.41	FE=088	854.01	4.99E-02	3.53E-02	4.13E-03	2
KI= 856.11	FE=089	855.54	2.48E-02	1.75E-02	2.05E-03	2
KI= 860.01	FE=090	859.43	3.58E-02	2.53E-02	2.94E-03	2
KI= 862.21	FE=091	861.48	4.88E-03	3.45E-03	4.01E-04	2
KI= 863.81	FE=092	864.18	1.48E-02	1.04E-02	1.21E-03	2
KI= 867.41	FE=094	866.76	3.22E-02	2.28E-02	2.63E-03	2
KI= 871.21	FE=096	870.39	2.11E-02	1.49E-02	1.72E-03	2
KI= 873.11	FE=097	872.08	5.22E-02	3.69E-02	4.24E-03	2
KI= 877.11	FE=098	876.19	1.62E-02	1.15E-02	1.31E-03	2
KI= 880.01	FE=099	880.57	2.98E-02	2.11E-02	2.39E-03	2
KI= 881.61	FE=100	882.12	4.64E-03	3.28E-03	3.72E-04	2
KI= 884.51	FE=102	883.45	6.10E-04	4.40E-04	4.98E-05	2
KI= 887.41	FE=103	886.26	4.94E-02	3.50E-02	3.94E-03	2
KI= 890.91	FE=104	891.35	1.77E-02	1.25E-02	1.40E-03	2
KI= 894.61	FE=106	894.04	1.17E+00	8.27E-01	9.25E-02	2
KI= 895.91	FE=107	896.41	2.81E-02	1.99E-02	2.21E-03	2
8900-n-C9-ANEI	FE=109	900.00	0.00E+00	0.00E+00	0.00E+00	2
KI= 910.81	FE=113	909.62	1.00E-02	7.08E-03	7.78E-04	2
KI= 913.91	FE=114	912.68	1.38E-02	9.75E-03	1.07E-03	2
KI= 915.41	FE=115	916.20	2.36E-02	1.67E-02	1.82E-03	2
KI= 920.11	FE=117	918.87	6.77E-02	4.79E-02	5.21E-03	2
KI= 922.61	FE=118	921.52	2.20E-03	1.55E-03	1.69E-04	2
KI= 924.71	FE=119	923.75	2.61E-02	1.85E-02	2.00E-03	2
KI= 929.11	FE=120	927.47	6.76E-02	4.78E-02	5.16E-03	2
KI= 933.51	FE=122	932.68	1.05E-02	7.42E-03	7.96E-04	2
KI= 939.41	FE=123	938.58	5.73E-02	4.05E-02	4.31E-03	2
KI= 941.01	FE=124	940.18	1.14E-02	8.03E-03	8.54E-04	2
KI= 945.31	FE=125	944.39	9.16E-03	6.47E-03	6.86E-04	2
KI= 947.41	FE=126	946.55	2.47E-02	1.74E-02	1.84E-03	2
KI= 952.01	FE=127	951.28	9.52E-03	6.73E-03	7.08E-04	2
KI= 953.51	FE=128	952.78	7.08E-03	5.01E-03	5.25E-04	2
KI= 955.81	FE=129	956.07	2.20E-02	1.55E-02	1.63E-03	2
KI= 960.51	FE=131	960.12	2.16E-02	1.53E-02	1.59E-03	2
KI= 962.11	FE=132	961.40	8.42E-03	5.96E-03	6.20E-04	2
KI= 964.71	FE=133	964.11	9.64E-03	6.82E-03	7.07E-04	2
KI= 966.11	FE=134	966.21	3.78E-03	2.68E-03	2.77E-04	2
KI= 970.81	FE=136	970.34	6.96E-03	4.92E-03	5.07E-04	2
KI= 972.71	FE=137	972.10	9.77E-03	6.91E-03	7.10E-04	2
KI= 974.91	FE=138	974.12	6.53E-02	4.62E-02	4.74E-03	2
KI= 976.91	FE=139	976.35	5.87E-02	4.15E-02	4.25E-03	2
KI= 979.21	FE=140	978.69	1.79E-02	1.27E-02	1.30E-03	2
KI= 981.71	FE=142	981.36	1.12E-02	7.94E-03	8.09E-04	2
KI= 983.31	FE=143	982.78	3.31E-02	2.36E-02	2.38E-03	2
KI= 984.21	FE=144	985.60	1.57E-02	1.11E-02	1.13E-03	2
KI= 989.01	FE=145	988.57	3.91E-03	2.76E-03	2.79E-04	2
KI= 993.51	FE=146	993.20	8.17E-02	5.77E-02	5.81E-03	2
KI= 995.31	FE=147	996.95	5.68E-02	4.01E-02	4.03E-03	2
KI= 996.81	FE=148	996.10	2.67E-02	1.89E-02	1.90E-03	2
91000-n-C10-ANEI	FE=149	1000.00	0.00E+00	0.00E+00	0.00E+00	2
KI=1003.91	FE=150	1003.73	2.48E-02	1.75E-02	1.75E-03	2
KI=1009.01	FE=151	1009.87	4.30E-02	3.04E-02	3.01E-03	2

TABLE 44 (continued)

KI=1013.91	FE=152	1013.44	1.27E-02	8.98E-03	8.84E-04	2
KI=1017.01	FE=153	1016.55	4.98E-02	3.52E-02	3.46E-03	2
KI=1019.31	FE=154	1018.69	6.42E-02	4.54E-02	4.46E-03	2
KI=1020.11	FE=155	1020.04	2.44E-02	1.73E-02	1.69E-03	2
KI=1022.91	FE=156	1022.77	1.00E-02	7.08E-03	6.92E-04	2
KI=1025.81	FE=157	1025.44	7.23E-02	5.11E-02	4.98E-03	2
KI=1028.41	FE=158	1028.42	4.15E-02	2.97E-02	2.85E-03	2
KI=1031.41	FE=159	1031.28	4.42E-02	3.12E-02	3.03E-03	2
KI=1033.41	FE=160	1033.05	4.96E-02	3.52E-02	3.41E-03	2
KI=1034.41	FE=161	1034.36	1.23E-01	8.67E-02	8.38E-03	2
KI=1036.41	FE=162	1036.12	9.28E-03	6.56E-03	6.33E-04	2
KI=1038.51	FE=163	1038.20	4.03E-02	2.85E-02	2.74E-03	2
KI=1040.61	FE=164	1040.22	8.98E-02	6.35E-02	6.11E-03	2
KI=1043.21	FE=165	1042.82	8.42E-02	5.96E-02	5.71E-03	2
KI=1046.41	FE=167	1046.03	4.08E-02	2.88E-02	2.76E-03	2
KI=1049.41	FE=168	1049.13	1.10E-01	7.75E-02	7.39E-03	2
KI=1050.61	FE=169	1050.22	1.56E-02	1.10E-02	1.05E-03	2
KI=1053.81	FE=170	1053.40	6.45E-02	4.56E-02	4.33E-03	2
KI=1057.91	FE=173	1057.62	7.71E-02	5.46E-02	5.16E-03	2
KI=1060.81	FE=174	1060.55	5.47E-02	3.87E-02	3.65E-03	2
KI=1064.61	FE=175	1064.24	3.64E-02	2.59E-02	2.43E-03	2
KI=1066.21	FE=176	1065.80	5.81E-02	4.11E-02	3.86E-03	2
KI=1070.61	FE=177	1070.26	2.78E-02	1.97E-02	1.84E-03	2
KI=1072.81	FE=178	1072.30	1.44E-02	1.02E-02	9.50E-04	2
KI=1079.01	FE=179	1078.57	5.79E-02	4.09E-02	3.79E-03	2
KI=1081.61	FE=180	1081.01	1.67E-01	1.18E-01	1.09E-02	2
KI=1084.31	FE=181	1083.82	2.69E-02	1.90E-02	1.75E-03	2
KI=1087.21	FE=182	1086.70	1.04E-01	7.34E-02	6.73E-03	2
KI=1089.41	FE=183	1088.92	8.25E-02	5.84E-02	5.36E-03	2
KI=1090.81	FE=184	1090.43	1.17E-02	8.29E-03	7.60E-04	2
KI=1093.31	FE=185	1093.31	1.49E-02	1.05E-02	9.63E-04	2
KI=1096.01	FE=186	1095.48	6.42E-02	4.54E-02	4.14E-03	2
91100-n-C11-ANE	FE=187	1100.00	0.00E+00	0.00E+00	0.00E+00	2
KI=1104.41	FE=189	1104.14	4.20E-02	2.97E-02	2.69E-03	2
KI=1106.61	FE=190	1106.13	2.51E-02	1.78E-02	1.61E-03	2
KI=1108.41	FE=191	1107.99	1.95E-03	1.38E-03	1.25E-04	2
KI=1110.31	FE=192	1109.76	1.88E-02	1.33E-02	1.20E-03	2
KI=1112.61	FE=193	1112.02	5.71E-02	4.04E-02	3.63E-03	2
KI=1115.81	FE=194	1115.11	2.05E-02	1.45E-02	1.30E-03	2
KI=1117.71	FE=195	1117.34	8.91E-02	6.30E-02	5.64E-03	2
KI=1119.71	FE=196	1119.33	1.83E-02	1.29E-02	1.14E-03	2
KI=1123.41	FE=198	1123.86	1.15E-02	8.12E-03	7.22E-04	2
KI=1127.01	FE=199	1126.49	5.37E-02	3.80E-02	3.37E-03	2
KI=1129.41	FE=200	1129.07	2.56E-02	1.81E-02	1.61E-03	2
KI=1133.71	FE=202	1133.26				1
KI=1135.01	FE=203	1134.56	1.20E-02	8.44E-03	7.44E-04	2
KI=1137.11	FE=204	1136.70	2.93E-02	2.07E-02	1.82E-03	2
KI=1139.71	FE=205	1138.46	2.44E-03	1.73E-03	1.52E-04	2
KI=1141.01	FE=206	1140.23	1.03E-01	7.30E-02	6.40E-03	2
KI=1144.01	FE=207	1143.17	1.22E-03	8.80E-04	7.70E-05	2
KI=1148.31	FE=208	1147.82	1.66E-02	1.17E-02	1.02E-03	2
KI=1149.81	FE=209	1149.51	2.47E-02	1.74E-02	1.52E-03	2
KI=1152.61	FE=210	1151.16	3.52E-02	2.49E-02	2.16E-03	2
KI=1155.01	FE=211	1154.57	1.59E-02	1.12E-02	9.72E-04	2
KI=1156.11	FE=212	1155.64	3.61E-02	2.55E-02	2.21E-03	2
KI=1158.01	FE=213	1157.47				1
KI=1159.81	FE=214	1159.51	5.08E-02	3.59E-02	3.10E-03	2
KI=1161.81	FE=215	1161.23	5.20E-02	3.68E-02	3.17E-03	2
KI=1164.21	FE=216	1163.79	5.49E-02	3.88E-02	3.34E-03	2
KI=1170.41	FE=217	1170.14	1.04E-01	7.32E-02	6.26E-03	2
KI=1175.91	FE=219	1174.56	2.39E-02	1.49E-02	1.44E-03	2

TABLE 44 (continued)

KI=1179.71	FE=220	1179.51	2.10E-02	1.48E-02	1.26E-03	2
KI=1181.41	FE=221	1180.92	4.44E-02	3.14E-02	2.66E-03	2
KI=1185.31	FE=222	1184.56	2.37E-02	1.67E-02	1.41E-03	2
KI=1189.61	FE=223	1189.23	7.57E-03	5.35E-03	4.50E-04	2
KI=1191.51	FE=224	1190.57				1
KI=1193.91	FE=225	1193.87				1
§1200-n-C12-ANE	FE=227	1200.00	0.00E+00	0.00E+00	0.00E+00	2
KI=1203.41	FE=228	1202.67	8.40E-02	5.94E-02	4.94E-03	2
KI=1205.61	FE=229	1205.04	8.06E-03	5.70E-03	4.73E-04	2
KI=1210.91	FE=231	1209.29	2.00E-02	1.42E-02	1.17E-03	2
KI=1214.21	FE=232	1214.03	3.30E-02	2.23E-02	1.92E-03	2
KI=1218.21	FE=233	1218.40	1.22E-03	8.80E-04	7.22E-05	2
KI=1221.71	FE=235	1221.30	9.77E-03	6.91E-03	5.65E-04	2
KI=1224.31	FE=236	1223.92	1.54E-02	1.09E-02	8.89E-04	2
KI=1227.81	FE=237	1227.94	7.81E-03	5.52E-03	4.50E-04	2
KI=1233.91	FE=238	1233.54	4.64E-03	3.28E-03	2.66E-04	2
KI=1238.61	FE=239	1238.24	9.77E-03	6.91E-03	5.58E-04	2
KI=1241.71	FE=240	1241.25	3.42E-03	2.42E-03	1.95E-04	2
KI=1245.41	FE=241	1245.21	4.52E-02	3.19E-02	2.56E-03	2
KI=1248.51	FE=242	1247.97	2.81E-02	1.99E-02	1.59E-03	2
KI=1252.81	FE=243	1252.58	6.45E-02	4.56E-02	3.64E-03	2
KI=1254.81	FE=244	1254.55	1.12E-01	7.92E-02	6.32E-03	2
KI=1259.31	FE=245	1259.18	3.69E-02	2.61E-02	2.07E-03	2
KI=1264.01	FE=246	1263.74	8.79E-03	6.21E-03	4.92E-04	2
KI=1267.61	FE=247	1267.12	3.52E-02	2.49E-02	1.96E-03	2
KI=1270.21	FE=248	1270.20	2.44E-04	2.44E-04	1.92E-05	2
KI=1273.11	FE=249	1273.05	3.59E-02	2.54E-02	1.99E-03	2
KI=1276.11	FE=250	1275.89				1
KI=1277.51	FE=251	1278.55	2.52E+00	1.78E+00	1.39E-01	2
KI=1282.71	FE=253	1282.35	7.57E-03	5.35E-03	4.18E-04	2
KI=1285.61	FE=254	1285.57	1.05E-01	7.42E-02	5.77E-03	2
KI=1288.31	FE=255	1287.66	4.59E-02	3.25E-02	2.52E-03	2
KI=1294.21	FE=256	1293.69	4.64E-02	3.28E-02	2.54E-03	2
§1300-n-C13-ANE	FE=257	1300.00	0.00E+00	0.00E+00	0.00E+00	2
KI=1304.41	FE=258	1304.34	7.23E-02	5.11E-02	3.92E-03	2
KI=1309.61	FE=259	1309.26	9.77E-04	6.91E-04	5.27E-05	2
KI=1311.51	FE=260	1311.48	6.96E-02	4.92E-02	3.75E-03	2
KI=1318.01	FE=262	1317.84	2.44E-02	1.73E-02	1.31E-03	2
KI=1323.11	FE=263	1322.74	9.01E-02	6.37E-02	4.82E-03	2
KI=1328.01	FE=264	1328.38	1.66E-02	1.17E-02	8.84E-04	2
KI=1333.41	FE=265	1333.53	1.40E-01	9.93E-02	7.44E-03	2
KI=1338.41	FE=266	1338.30	1.14E-01	8.23E-02	6.15E-03	2
KI=1342.21	FE=267	1342.13	1.22E-02	8.63E-03	6.43E-04	2
KI=1347.51	FE=269	1347.30	5.40E-02	3.82E-02	2.83E-03	2
KI=1351.11	FE=270	1351.07	8.79E-03	6.21E-03	4.60E-04	2
KI=1354.01	FE=271	1353.92	4.83E-02	3.42E-02	2.52E-03	2
KI=1358.91	FE=272	1358.83	1.44E-02	1.02E-02	7.50E-04	2
KI=1364.01	FE=273	1363.91	1.51E-02	1.07E-02	7.85E-04	2
KI=1370.31	FE=274	1370.33	1.95E-03	1.38E-03	1.01E-04	2
KI=1376.71	FE=275	1376.69	9.45E-02	6.68E-02	4.85E-03	2
KI=1383.01	FE=276	1383.57	3.17E-02	2.24E-02	1.62E-03	2
KI=1388.61	FE=277	1388.50	1.03E-01	7.25E-02	5.22E-03	2
KI=1393.41	FE=278	1393.54	1.07E-01	7.60E-02	5.45E-03	2
§1400-n-C14-ANE	FE=279	1400.00	0.00E+00	0.00E+00	0.00E+00	2
KI=1404.01	FE=280	1403.96	7.08E-02	5.01E-02	3.57E-03	2
KI=1411.11	FE=282	1410.66	1.27E-01	8.98E-02	6.36E-03	2
KI=1434.11	FE=288	1435.59	1.25E-02	8.81E-03	6.13E-04	2
KI=1443.21	FE=289	1443.20	4.59E-02	3.25E-02	2.25E-03	2
KI=1446.11	FE=290	1446.21	1.57E-01	1.11E-01	7.70E-03	2
KI=1453.41	FE=292	1453.53	2.98E-02	2.11E-02	1.45E-03	2
KI=1458.71	FE=293	1458.55	4.35E-02	3.07E-02	2.11E-03	2

TABLE 44 (Concluded)

KI=1442.71	FE=294	1442.49	4.52E-02	3.19E-02	2.18E-03	2
KI=1470.71	FE=295	1470.56	7.06E-02	4.99E-02	3.39E-03	2
#1500-n-C15-ANE	FE=296	1500.00	0.00E+00	0.00E+00	0.00E+00	2
#1600-n-C16-ANE	FE=297	1600.00	0.00E+00	0.00E+00	0.00E+00	2
SANTH-410(1S)(KI=1772)		1768.65	8.28E-02	5.85E-02	3.31E-03	2
32118-(IMPURITY #3)		2118.00	0.00E+00	0.00E+00	0.00E+00	2
TOTAL CONCENTRATION		5000.00	0.00E+00	0.00E+00	0.00E+00	2

TABLE 45. STATISTICAL SURVEY OF THE CONCENTRATION (in mg/ml) OF NAMED FEATURES  
IN DUPLICATE ANALYSES OF A PETROLEUM-DERIVED JP-5 FUEL

STATISTICAL SUMMARY OF MH11 DATA BASE						
CONSISTING OF 2 SAMPLES						
CONCENTRATION (mg/ml )						
COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	ZREL STANDARD DEVIATION	NUMBER OF SAMPLES
CH2CL2 SOLVENT		0.00E+00	0.00E+00	0.00E+00	1.70E+38	2
IMPURITY #1(KI= 558.6)		1.38E-01	9.75E-02	6.89E-02	4.98E+01	2
IMPURITY #2(KI= 674.4)		6.42E-01	3.54E-03	2.50E-03	3.90E-01	2
#800-n-C8-ANE:	FE=066	1.25E-01	8.16E-03	5.77E-03	4.63E+00	2
KI= 828.1:	FE=078	9.05E-02	3.46E-03	2.45E-03	2.70E+00	2
KI= 842.7:	FE=082	1.33E-01	2.24E-03	1.59E-03	1.19E+00	2
KI= 865.0:	FE=093	1.31E-01	1.35E-03	9.54E-04	7.28E-01	2
KI= 871.2:	FE=096	3.60E-01	4.41E-03	3.12E-03	8.66E-01	2
KI= 880.0:	FE=099	4.87E-01	9.98E-03	7.04E-03	1.45E+00	2
KI= 881.6:	FE=100	2.14E-01	6.64E-03	4.71E-03	2.20E+00	2
KI= 884.5:	FE=102	1.71E-01	7.39E-02	5.22E-02	3.05E+01	2
KI= 892.6:	FE=105	1.24E-01				1
KI= 894.6:	FE=106	1.34E-01	7.53E-03	5.33E-03	3.97E+00	2
KI= 897.6:	FE=108	1.43E-01	6.16E-03	4.36E-03	3.06E+00	2
#900-n-C9-ANE:	FE=109	1.16E+00	3.00E-02	2.12E-02	1.82E+00	2
KI= 901.3:	FE=110	1.19E-01	6.03E-04	5.68E-04	4.79E-01	2
KI= 913.9:	FE=114	1.65E-01	6.12E-03	4.33E-03	2.62E+00	2
KI= 917.7:	FE=116	3.81E-01	8.25E-03	5.83E-03	1.53E+00	2
KI= 920.1:	FE=117	3.95E-01	9.40E-03	6.64E-03	1.68E+00	2
KI= 922.6:	FE=118	5.83E-01	1.07E-02	7.54E-03	1.29E+00	2
KI= 924.7:	FE=119	4.16E-01	1.00E-02	7.09E-03	1.70E+00	2
KI= 929.1:	FE=120	1.04E+00	2.15E-02	1.52E-02	1.46E+00	2
KI= 933.5:	FE=122	2.40E+00	4.34E-02	3.07E-02	1.28E+00	2
KI= 939.4:	FE=123	9.32E-01	7.21E-01	5.10E-01	5.47E+01	2
KI= 941.0:	FE=124	3.38E-01				1
KI= 945.3:	FE=125	3.95E-01	2.82E-01	1.99E-01	5.04E+01	2
KI= 947.4:	FE=126	4.80E-01	2.13E-01	1.50E-01	3.13E+01	2
KI= 952.0:	FE=127	1.39E+00	2.08E-02	1.47E-02	1.06E+00	2
KI= 953.5:	FE=128	2.01E+00	3.03E-02	2.71E-02	1.35E+00	2
KI= 955.8:	FE=129	2.35E+00	2.92E-02	2.07E-02	8.81E-01	2
KI= 956.8:	FE=130	4.52E-01	7.28E-03	5.13E-03	1.14E+00	2
KI= 960.5:	FE=131	1.22E+00	5.13E-03	3.63E-03	2.96E-01	2
KI= 962.1:	FE=132	3.70E+00	8.39E-02	5.93E-02	1.61E+00	2
KI= 964.7:	FE=133	4.26E+00	6.92E-02	4.89E-02	1.15E+00	2
KI= 967.4:	FE=135	3.57E+00	5.89E-02	4.16E-02	1.16E+00	2
KI= 970.8:	FE=136	3.68E+00	7.32E-02	5.18E-02	1.41E+00	2
KI= 972.7:	FE=137	1.47E+00	1.92E-01	1.36E-01	9.21E+00	2
KI= 974.9:	FE=138	2.25E-01				1
KI= 976.9:	FE=139	3.51E+00	6.54E-02	4.63E-02	1.32E+00	2
KI= 979.2:	FE=140	2.36E+00	9.56E-01	6.76E-01	2.86E+01	2
KI= 980.2:	FE=141	1.02E+00				1
KI= 981.7:	FE=142	1.47E+00	2.14E-02	1.51E-02	1.03E+00	2
KI= 983.3:	FE=143	1.12E+00	8.89E-03	6.28E-03	5.62E-01	2
KI= 986.2:	FE=144	4.24E+00	8.10E-02	5.73E-02	1.35E+00	2
KI= 989.0:	FE=145	1.88E+00	3.36E-02	2.37E-02	1.26E+00	2
KI= 993.5:	FE=146	2.52E+00	4.38E-02	3.10E-02	1.23E+00	2
KI= 995.3:	FE=147	6.12E-01	1.27E-02	9.00E-03	1.47E+00	2
KI= 996.8:	FE=148	1.03E+00	2.06E-02	1.44E-02	1.42E+00	2
#1000-n-C10-ANE:	FE=149	1.22E+01	2.44E-01	1.72E-01	1.41E+00	2
KI=1003.9:	FE=150	1.92E+00	3.87E-02	2.74E-02	1.43E+00	2
KI=1009.0:	FE=151	3.15E-01	3.72E-01	2.63E-01	8.37E+01	2
KI=1013.9:	FE=152	4.79E+00	7.93E-02	5.60E-02	1.17E+00	2
KI=1017.0:	FE=153	2.27E+00	4.86E-02	3.43E-02	1.52E+00	2

TABLE 45 (continued)

KI=1020.11	FE=153	3.38E+00	4.79E-02	3.39E-02	1.00E+00	2
KI=1022.91	FE=156	4.57E+00	7.14E-02	5.04E-02	1.11E+00	2
KI=1025.81	FE=157	6.18E+00	1.20E-01	8.52E-02	1.38E+00	2
KI=1028.41	FE=158	6.04E+00	8.82E-02	6.24E-02	1.03E+00	2
KI=1031.61	FE=159	3.69E+00	3.83E-02	2.71E-02	7.34E-01	2
KI=1034.61	FE=161	4.44E+00	1.54E-01	1.10E-01	2.48E+00	2
KI=1036.61	FE=162	1.15E+00	3.12E-02	2.21E-02	1.92E+00	2
KI=1038.51	FE=163	2.41E+00	4.23E-02	2.99E-02	1.24E+00	2
KI=1040.61	FE=164	1.03E+00	3.09E-02	2.19E-02	2.13E+00	2
KI=1043.21	FE=165	4.49E+00	9.69E-02	6.85E-02	1.53E+00	2
KI=1044.71	FE=166	8.05E-01	1.03E-02	7.27E-03	9.03E-01	2
KI=1046.41	FE=167	5.24E+00	9.63E-02	6.81E-02	1.30E+00	2
KI=1049.41	FE=168	1.30E+00	5.05E-03	3.57E-03	2.75E-01	2
KI=1050.81	FE=169	6.09E+00	1.52E-01	1.07E-01	1.76E+00	2
KI=1053.81	FE=170	3.57E+00	1.13E-01	7.94E-02	2.23E+00	2
KI=1053.31	FE=171	9.07E-01	4.82E-02	3.41E-02	3.76E+00	2
KI=1057.91	FE=173	5.95E+00	1.14E-01	8.05E-02	1.35E+00	2
KI=1060.81	FE=174	6.01E+00	1.04E-01	7.34E-02	1.22E+00	2
KI=1064.61	FE=175	7.79E+00	1.46E-01	1.03E-01	1.33E+00	2
KI=1066.21	FE=176	1.64E+00	2.97E-02	2.10E-02	1.28E+00	2
KI=1070.61	FE=177	8.98E+00	1.63E-01	1.15E-01	1.28E+00	2
KI=1072.81	FE=178	3.96E+00	4.04E-02	2.87E-02	7.26E-01	2
KI=1079.01	FE=179	5.20E+00	1.02E-02	7.20E-03	1.39E-01	2
KI=1081.61	FE=180	3.12E+00	6.90E-02	4.88E-02	1.56E+00	2
KI=1084.31	FE=181	3.48E+00	3.78E-02	2.67E-02	7.68E-01	2
KI=1087.21	FE=182	3.01E+00	5.01E-02	3.54E-02	1.18E+00	2
KI=1089.41	FE=183	1.11E+00	2.88E-02	2.03E-02	1.83E+00	2
KI=1090.81	FE=184	1.64E+00	3.96E-02	2.80E-02	1.71E+00	2
KI=1093.81	FE=185	1.83E+00	5.28E-03	3.73E-03	2.04E-01	2
KI=1096.01	FE=186	2.24E+00	1.77E-02	1.25E-02	5.59E-01	2
81100-n-C11-ANE	FE=187	2.82E+01	3.54E-01	2.52E-01	8.90E-01	2
KI=1101.71	FE=188	9.55E-01	6.30E-02	4.45E-02	4.66E+00	2
KI=1104.41	FE=189	2.12E+00	6.20E-02	4.38E-02	2.07E+00	2
KI=1108.41	FE=191	1.67E+00	7.87E-02	5.57E-02	3.33E+00	2
KI=1110.31	FE=192	1.26E+00	9.17E-02	6.48E-02	5.14E+00	2
KI=1112.61	FE=193	4.15E+00	5.46E-02	3.86E-02	9.31E-01	2
KI=1115.81	FE=194	4.93E-01				1
KI=1117.71	FE=195	1.87E+00	8.43E-02	5.96E-02	3.19E+00	2
KI=1119.71	FE=196	1.22E+00	9.22E-02	6.52E-02	5.36E+00	2
KI=1123.41	FE=198	2.75E+00	1.15E-01	8.16E-02	2.97E+00	2
KI=1127.01	FE=199	3.97E+00	8.23E-02	5.82E-02	1.46E+00	2
KI=1129.41	FE=200	9.70E+00	1.03E-01	7.31E-02	7.54E-01	2
KI=1133.71	FE=202	2.10E+00	1.90E+00	1.34E+00	6.40E+01	2
KI=1135.01	FE=203	2.61E+00	4.92E-04	3.48E-04	1.33E-02	2
KI=1137.11	FE=204	1.23E+00	1.87E-01	1.32E-01	1.08E+01	2
KI=1141.01	FE=206	1.23E+01	1.78E-01	1.26E-01	1.02E+00	2
KI=1144.01	FE=207	3.60E+00	2.87E-01	2.03E-01	5.63E+00	2
KI=1148.31	FE=208	5.43E+00	1.19E-01	8.39E-02	1.55E+00	2
KI=1149.81	FE=209	9.25E-01	7.65E-02	5.41E-02	5.85E+00	2
KI=1152.61	FE=210	1.23E+01	1.50E-01	1.06E-01	8.67E-01	2
KI=1155.01	FE=211	2.71E+00	7.76E-02	5.49E-02	2.03E+00	2
KI=1156.11	FE=212	5.07E+00	2.62E-01	1.85E-01	3.66E+00	2
KI=1158.01	FE=213	6.54E-01	1.09E-01	7.71E-02	1.18E+01	2
KI=1159.81	FE=214	4.20E+00	1.30E-01	9.18E-02	2.18E+00	2
KI=1161.81	FE=215	1.84E+00	1.33E-01	9.38E-02	5.09E+00	2
KI=1164.21	FE=216	6.99E+00	3.02E-01	2.13E-01	3.05E+00	2
KI=1170.41	FE=217	7.49E+00	4.12E-01	2.91E-01	3.89E+00	2
KI=1175.91	FE=219	2.58E+00	3.31E-01	2.34E-01	9.08E+00	2
KI=1179.71	FE=220	4.42E+00	1.49E-01	1.06E-01	2.39E+00	2
KI=1181.41	FE=221	3.41E+00	2.12E-01	1.50E-01	4.40E+00	2
KI=1185.31	FE=222	6.04E+00	4.91E-01	3.47E-01	5.75E+00	2

TABLE 45 (continued)

KI=1189.61	FE=223	5.05E+00	3.66E-01	2.59E-01	5.12E+00	2
KI=1191.51	FE=224	1.28E+00	1.85E-01	1.31E-01	1.03E+01	2
KI=1193.91	FE=225	1.50E+00	3.90E-02	2.75E-02	1.83E+00	2
KI=1195.41	FE=226	1.21E+00	6.31E-01	4.46E-01	3.69E+01	2
1200-n-C12-ANE	FE=227	1.99E+01	3.14E-01	2.22E-01	1.12E+00	2
KI=1203.41	FE=228	7.82E-01	3.74E-01	2.64E-01	3.33E+01	2
KI=1205.61	FE=229	3.15E+00	6.27E-01	4.43E-01	1.41E+01	2
KI=1207.21	FE=230	2.56E-01				1
KI=1210.91	FE=231	1.86E+00	7.71E-01	5.45E-01	2.93E+01	2
KI=1214.21	FE=232	8.34E+00	8.36E-01	5.91E-01	7.09E+00	2
KI=1218.21	FE=233	2.45E+00	4.52E-01	3.20E-01	1.31E+01	2
KI=1221.71	FE=235	1.88E+00	2.42E-01	1.71E-01	9.10E+00	2
KI=1224.31	FE=236	1.29E+00	1.91E-01	1.35E-01	1.04E+01	2
KI=1227.81	FE=237	3.48E+00	1.27E-01	9.01E-02	2.59E+00	2
KI=1233.91	FE=238	3.93E+00	9.43E-03	6.67E-03	1.70E-01	2
KI=1238.61	FE=239	3.03E+00	4.18E-03	2.96E-03	9.76E-02	2
KI=1241.71	FE=240	4.78E+00	4.89E-02	3.46E-02	7.24E-01	2
KI=1245.41	FE=241	7.40E-01	1.13E-02	7.95E-03	1.08E+00	2
KI=1248.51	FE=242	3.30E+00	5.06E-01	3.58E-01	1.02E+01	2
KI=1252.81	FE=243	2.85E+00	7.70E-02	5.45E-02	1.91E+00	2
KI=1254.81	FE=244	6.27E+00	1.54E-01	1.09E-01	1.74E+00	2
KI=1259.31	FE=245	3.13E+00	5.78E-01	4.09E-01	1.31E+01	2
KI=1264.01	FE=246	3.90E+00	1.05E-01	7.40E-02	1.90E+00	2
KI=1267.61	FE=247	1.40E+00	8.54E-02	6.04E-02	4.32E+00	2
KI=1270.21	FE=248	2.69E+00	9.90E-02	7.00E-02	2.60E+00	2
KI=1273.11	FE=249	4.76E+00	1.59E-01	1.12E-01	2.36E+00	2
KI=1276.11	FE=250	3.05E-01				1
KI=1277.51	FE=251	3.73E-01				1
KI=1282.71	FE=253	3.82E+00	5.75E-01	4.07E-01	1.07E+01	2
KI=1285.61	FE=254	1.08E+00	2.96E-01	2.09E-01	1.93E+01	2
KI=1288.31	FE=255	2.21E+00	5.01E-01	3.55E-01	1.60E+01	2
KI=1294.21	FE=256	2.25E+00	4.02E-01	2.84E-01	1.26E+01	2
1300-n-C13-ANE	FE=257	1.21E+01	3.58E-01	2.53E-01	2.10E+00	2
KI=1304.41	FE=258	8.98E-01	9.01E-02	6.37E-02	7.10E+00	2
KI=1309.61	FE=259	2.35E+00	4.23E-01	2.99E-01	1.27E+01	2
KI=1311.51	FE=260	1.09E+00	8.35E-01	5.90E-01	5.44E+01	2
KI=1318.01	FE=262	2.80E+00	1.28E+00	9.02E-01	3.22E+01	2
KI=1323.11	FE=263	1.66E+00	4.73E-01	3.34E-01	2.02E+01	2
KI=1328.01	FE=264	1.22E+00	1.95E-03	1.38E-03	1.13E-01	2
KI=1333.41	FE=265	1.98E+00	3.00E-02	2.12E-02	1.07E+00	2
KI=1338.41	FE=266	1.90E+00	1.10E-01	7.80E-02	4.11E+00	2
KI=1342.21	FE=267	5.55E-01	8.87E-02	6.27E-02	1.13E+01	2
KI=1344.51	FE=268	1.01E-01				1
KI=1347.51	FE=269	4.21E-01	5.50E-01	3.89E-01	9.25E+01	2
KI=1351.11	FE=270	2.81E+00	3.68E-01	2.60E-01	9.26E+00	2
KI=1354.01	FE=271	1.24E+00	1.71E-01	1.21E-01	9.74E+00	2
KI=1358.91	FE=272	2.23E+00	2.05E-01	1.45E-01	6.51E+00	2
KI=1364.01	FE=273	1.90E+00	6.96E-02	4.92E-02	2.59E+00	2
KI=1370.31	FE=274	1.66E+00	1.39E-02	9.85E-03	5.94E-01	2
KI=1376.71	FE=275	8.70E-01	1.12E-01	7.91E-02	9.08E+00	2
KI=1383.01	FE=276	2.00E+00	2.15E-01	1.52E-01	7.60E+00	2
KI=1388.61	FE=277	5.07E-01	1.17E-02	8.28E-03	1.63E+00	2
KI=1393.41	FE=278	1.48E+00	2.28E-02	1.61E-02	1.08E+00	2
1400-n-C14-ANE	FE=279	5.62E+00	6.32E-02	4.47E-02	7.96E-01	2
KI=1404.01	FE=280	6.94E-01	7.08E-03	5.01E-03	7.22E-01	2
KI=1411.11	FE=282	1.26E-01	1.83E-03	1.30E-03	1.03E+00	2
KI=1413.61	FE=283	6.64E-01	1.15E+00	8.11E-01	1.22E+02	2
KI=1422.01	FE=285	4.58E-01	1.93E-02	1.37E-02	2.98E+00	2
KI=1427.21	FE=286	6.52E-01	2.78E-02	1.96E-02	3.01E+00	2
KI=1434.11	FE=288	8.91E-01	5.95E-02	4.21E-02	4.72E+00	2
KI=1443.21	FE=289	4.92E-01	2.25E-01	1.59E-01	3.23E+01	2



TABLE 45 (Concluded)

KI=1446.11	FE=290	4.26E-01	1.49E-01	1.05E-01	2.47E+01	2
KI=1450.51	FE=291	6.12E-01	5.13E-02	3.62E-02	5.92E+00	2
KI=1453.41	FE=292	1.3E+00	7.04E-02	4.98E-02	4.41E+00	2
KI=1458.71	FE=293	1.18E+00	5.26E-02	3.72E-02	3.15E+00	2
KI=1462.71	FE=294	1.81E+00	1.59E-01	1.13E-01	6.22E+00	2
KI=1470.71	FE=295	7.91E-01	3.14E-01	2.22E-01	2.81E+01	2
#1500-n-C15-ANEI	FE=296	4.00E+00	4.19E-02	2.97E-02	7.41E-01	2
#1600-n-C16-ANEI	FF=257	2.62E+00	2.82E-02	1.99E-02	7.61E-01	2
SANTH-410(1S)(KI=1772)		1.00E+01	1.91E-06	1.91E-06	1.91E-05	2
#2118-(IMPURITY #3)		8.37E-01	4.51E-02	3.19E-02	3.81E+00	2
TOTAL CONCENTRATION		5.95E+02	3.31E+01	2.34E+01	3.94E+00	2

TABLE 46. STATISTICAL SURVEY OF THE CONCENTRATION (in % Rel.)  
OF NAMED FEATURES IN DUPLICATE ANALYSES OF A  
PETROLEUM-DERIVED JP-4 FUEL

STATISTICAL SUMMARY OF MH11 DATA BASE

CONSISTING OF 2 SAMPLES  
CONCENTRATION (% REL.)

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	XREL STANDARD DEVIATION	NUMBER OF SAMPLES
CH2CL2 SOLVENT		0.00E+00	0.00E+00	0.00E+00	1.70E+38	2
IMPURITY #1(KI= 558.6)		9.30E+01	6.55E+01	4.63E+01	4.98E+01	2
IMPURITY #2(KI= 674.4)		8.56E+01	4.72E-01	3.34E-01	3.90E-01	2
8800-n-C8-ANEI	FE=066	4.64E-01	3.04E-02	2.15E-02	4.63E+00	2
KI= 828.11	FE=078	1.62E+00	6.20E-02	4.38E-02	2.70E+00	2
KI= 842.71	FE=082	6.44E+00	1.09E-01	7.69E-02	1.19E+00	2
KI= 863.01	FE=093	2.05E+00	2.11E-02	1.49E-02	7.28E-01	2
KI= 871.21	FE=096	4.99E+00	6.11E-02	4.32E-02	8.66E-01	2
KI= 880.01	FE=099	1.69E+01	3.47E-01	2.45E-01	1.45E+00	2
KI= 881.61	FE=100	1.90E+01	5.93E-01	4.19E-01	2.20E+00	2
KI= 884.51	FE=102	4.75E+00	2.05E+00	1.45E+00	3.05E+01	2
KI= 892.61	FE=105	7.97E+01				1
KI= 894.61	FE=106	3.14E+01	1.77E+00	1.25E+00	3.97E+00	2
KI= 897.61	FE=108	1.73E+01	7.46E-01	5.28E-01	3.06E+00	2
8900-n-C9-ANEI	FE=109	7.21E+00	1.86E-01	1.31E-01	1.82E+00	2
KI= 901.31	FE=110	7.62E+01	5.16E-01	3.65E-01	4.79E-01	2
KI= 913.91	FE=114	4.16E+01	1.54E+00	1.09E+00	2.62E+00	2
KI= 917.71	FE=116	2.34E+01	5.06E-01	3.58E-01	1.53E+00	2
KI= 920.11	FE=117	8.42E+01	2.00E+00	1.42E+00	1.68E+00	2
KI= 922.61	FE=118	2.69E+01	4.93E-01	3.48E-01	1.29E+00	2
KI= 924.71	FE=119	3.47E+01	8.38E-01	5.92E-01	1.70E+00	2
KI= 929.11	FE=120	5.93E+01	1.22E+00	8.65E-01	1.46E+00	2
KI= 933.51	FE=122	6.47E+01	1.17E+00	8.28E-01	1.28E+00	2
KI= 939.41	FE=123	3.73E+01	2.89E+01	2.04E+01	5.47E+01	2
KI= 941.01	FE=124	1.04E+02				1
KI= 945.31	FE=125	2.96E+01	2.11E+01	1.49E+01	5.04E+01	2
KI= 947.41	FE=126	3.85E+01	1.71E+01	1.21E+01	3.13E+01	2
KI= 952.01	FE=127	1.68E+02	2.51E+00	1.77E+00	1.06E+00	2
KI= 953.51	FE=128	1.35E+02	2.58E+00	1.82E+00	1.35E+00	2
KI= 953.81	FE=129	5.65E+01	7.04E-01	4.98E-01	8.81E-01	2
KI= 956.81	FE=130	3.10E+01	4.99E-01	3.53E-01	1.14E+00	2
KI= 960.51	FE=131	1.34E+02	5.63E-01	3.98E-01	2.96E-01	2
KI= 962.11	FE=132	7.99E+01	1.81E+00	1.28E+00	1.61E+00	2
KI= 964.71	FE=133	1.69E+02	2.75E+00	1.94E+00	1.15E+00	2
KI= 967.41	FE=135	2.80E+02	4.60E+00	3.26E+00	1.16E+00	2
KI= 970.81	FE=136	1.58E+02	3.14E+00	2.22E+00	1.41E+00	2
KI= 972.71	FE=137	9.41E+01	1.23E+01	8.67E+00	9.21E+00	2
KI= 974.91	FE=138	1.78E+02				1
KI= 976.91	FE=139	2.37E+02	4.42E+00	3.12E+00	1.32E+00	2
KI= 979.21	FE=140	1.91E+02	7.74E+01	5.47E+01	2.86E+01	2
KI= 980.21	FE=141	2.84E+02				1
KI= 981.71	FE=142	2.74E+02	3.98E+00	2.81E+00	1.03E+00	2
KI= 983.31	FE=143	4.98E+02	3.96E+00	2.80E+00	5.62E-01	2
KI= 986.21	FE=144	5.95E+01	1.14E+00	8.04E-01	1.35E+00	2
KI= 989.01	FE=145	2.26E+02	4.04E+00	2.86E+00	1.26E+00	2
KI= 993.51	FE=146	2.98E+02	5.17E+00	3.66E+00	1.23E+00	2
KI= 993.31	FE=147	2.35E+02	5.29E+00	3.74E+00	1.47E+00	2
KI= 996.81	FE=148	4.47E+02	8.95E+00	6.33E+00	1.42E+00	2
91000-n-C10-ANEI	FE=149	9.44E+01	1.88E+00	1.33E+00	1.41E+00	2
KI=1003.91	FE=150	2.80E+02	5.66E+00	4.00E+00	1.43E+00	2
KI=1009.01	FE=151	1.75E+02	2.07E+02	1.46E+02	8.37E+01	2
KI=1013.91	FE=152	1.34E+02	2.23E+00	1.57E+00	1.17E+00	2
KI=1017.01	FE=153	1.73E+02	3.70E+00	2.62E+00	1.52E+00	2

TABLE 46 (continued)

KI=1020.11	FE=155	3.60E+02	5.11E+00	3.61E+00	1.00E+00	2
KI=1022.91	FE=156	1.57E+02	2.46E+00	1.74E+00	1.11E+00	2
KI=1025.81	FE=157	2.94E+02	5.73E+00	4.05E+00	1.38E+00	2
KI=1028.41	FE=158	4.53E+02	6.61E+00	4.68E+00	1.03E+00	2
KI=1031.61	FE=159	4.66E+02	4.84E+00	3.42E+00	7.34E-01	2
KI=1034.61	FE=161	6.69E+02	2.35E+01	1.66E+01	2.48E+00	2
KI=1036.61	FE=162	3.93E+02	1.06E+01	7.53E+00	1.92E+00	2
KI=1038.51	FE=163	3.30E+02	5.77E+00	4.08E+00	1.24E+00	2
KI=1040.61	FE=164	6.12E+02	1.84E+01	1.30E+01	2.13E+00	2
KI=1043.21	FE=165	3.50E+02	7.55E+00	5.34E+00	1.53E+00	2
KI=1044.71	FE=166	1.71E+02	2.18E+00	1.54E+00	9.03E-01	2
KI=1046.51	FE=167	2.57E+02	4.73E+00	3.35E+00	1.30E+00	2
KI=1049.41	FE=168	1.75E+02	6.80E-01	4.81E-01	2.75E-01	2
KI=1050.61	FE=169	5.12E+02	1.28E+01	9.03E+00	1.76E+00	2
KI=1053.81	FE=170	2.19E+02	6.91E+00	4.89E+00	2.23E+00	2
KI=1055.31	FE=171	2.70E+02	1.44E+01	1.02E+01	3.76E+00	2
KI=1057.91	FE=173	4.45E+02	8.51E+00	6.02E+00	1.35E+00	2
KI=1060.81	FE=174	2.84E+02	4.90E+00	3.47E+00	1.22E+00	2
KI=1064.61	FE=175	3.15E+02	5.91E+00	4.18E+00	1.33E+00	2
KI=1066.21	FE=176	2.71E+02	4.90E+00	3.46E+00	1.28E+00	2
KI=1070.61	FE=177	2.78E+02	5.04E+00	3.57E+00	1.28E+00	2
KI=1072.81	FE=178	2.19E+02	2.24E+00	1.59E+00	7.26E-01	2
KI=1079.01	FE=179	1.68E+02	3.29E-01	2.33E-01	1.39E-01	2
KI=1081.61	FE=180	3.77E+02	8.33E+00	5.89E+00	1.56E+00	2
KI=1084.31	FE=181	3.61E+02	3.92E+00	2.77E+00	7.68E-01	2
KI=1087.21	FE=182	5.07E+02	8.44E+00	5.97E+00	1.18E+00	2
KI=1089.41	FE=183	2.44E+02	6.31E+00	4.46E+00	1.83E+00	2
KI=1090.81	FE=184	3.23E+02	7.79E+00	5.51E+00	1.71E+00	2
KI=1093.81	FE=185	7.40E+02	2.13E+00	1.51E+00	2.04E-01	2
KI=1096.01	FE=186	2.44E+02	1.93E+00	1.36E+00	5.59E-01	2
81100-n-C11-ANE	FE=187	1.83E+02	2.30E+00	1.63E+00	8.90E-01	2
KI=1101.71	FE=188	4.96E+02	3.27E+01	2.31E+01	4.46E+00	2
KI=1104.41	FE=189	4.40E+02	1.29E+01	9.11E+00	2.07E+00	2
KI=1108.41	FE=191	1.79E+02	8.42E+00	5.96E+00	3.33E+00	2
KI=1110.31	FE=192	4.79E+02	3.48E+01	2.46E+01	5.14E+00	2
KI=1112.61	FE=193	2.25E+02	2.97E+00	2.10E+00	9.31E-01	2
KI=1115.81	FE=194	3.00E+01				1
KI=1117.71	FE=195	2.44E+02	1.10E+01	7.78E+00	3.19E+00	2
KI=1119.71	FE=196	1.00E+03	7.61E+01	5.38E+01	5.36E+00	2
KI=1123.41	FE=198	8.93E+02	3.75E+01	2.65E+01	2.97E+00	2
KI=1127.01	FE=199	3.58E+02	7.41E+00	5.24E+00	1.46E+00	2
KI=1129.41	FE=200	5.67E+02	6.04E+00	4.27E+00	7.54E-01	2
KI=1133.71	FE=202	1.12E+03	1.01E+03	7.14E+02	6.40E+01	2
KI=1135.01	FE=203	6.74E+02	1.27E-01	8.99E-02	1.33E-02	2
KI=1137.11	FE=204	4.50E+02	6.87E+01	4.86E+01	1.06E+01	2
KI=1141.01	FE=206	1.39E+03	2.00E+01	1.42E+01	1.02E+00	2
KI=1144.01	FE=207	2.33E+02	1.86E+01	1.31E+01	5.63E+00	2
KI=1148.31	FE=208	7.08E+02	1.55E+01	1.10E+01	1.55E+00	2
KI=1149.81	FE=209	2.75E+02	2.28E+01	1.61E+01	5.85E+00	2
KI=1152.61	FE=210	9.44E+02	1.16E+01	8.19E+00	8.67E-01	2
KI=1155.01	FE=211	3.83E+02	1.10E+01	7.75E+00	2.03E+00	2
KI=1156.11	FE=212	3.24E+02	1.68E+01	1.18E+01	3.66E+00	2
KI=1158.01	FE=213	3.19E+02	5.31E+01	3.76E+01	1.18E+01	2
KI=1159.81	FE=214	2.86E+02	8.84E+00	6.25E+00	2.18E+00	2
KI=1161.81	FE=215	4.84E+02	3.49E+01	2.46E+01	5.09E+00	2
KI=1164.21	FE=216	2.57E+02	1.11E+01	7.83E+00	3.05E+00	2
KI=1170.41	FE=217	2.84E+02	1.75E+01	1.11E+01	3.89E+00	2
KI=1175.91	FE=219	5.92E+02	7.50E+01	5.37E+01	9.08E+00	2
KI=1179.71	FE=220	6.73E+02	2.27E+01	1.61E+01	2.39E+00	2
KI=1181.41	FE=221	4.01E+02	2.49E+01	1.76E+01	4.40E+00	2
KI=1185.31	FE=222	3.06E+02	2.49E+01	1.76E+01	5.75E+00	2

TABLE 46 (continued)

KI=1189.61	FE=223	5.14E+02	3.72E+01	2.63E+01	5.12E+00	2
KI=1191.51	FE=224	1.56E+02	2.27E+01	1.60E+01	1.03E+01	2
KI=1193.91	FE=225	1.50E+02	3.89E+00	2.75E+00	1.83E+00	2
KI=1195.41	FE=226	3.49E+02	1.82E+02	1.29E+02	3.69E+01	2
01200-n-C12-ANE	FE=227	1.57E+02	2.48E+00	1.76E+00	1.12E+00	2
KI=1203.41	FE=228	1.74E+02	8.34E+01	5.90E+01	3.38E+01	2
KI=1205.61	FE=229	9.04E+02	1.80E+02	1.28E+02	1.41E+01	2
KI=1207.21	FE=230	2.07E+02				1
KI=1210.91	FE=231	2.69E+02	1.12E+02	7.90E+01	2.93E+01	2
KI=1214.21	FE=232	2.13E+02	2.14E+01	1.51E+01	7.09E+00	2
KI=1218.21	FE=233	6.77E+02	1.25E+02	8.84E+01	1.31E+01	2
KI=1221.71	FE=235	5.55E+02	7.14E+01	5.05E+01	9.10E+00	2
KI=1224.31	FE=236	4.16E+02	6.13E+01	4.34E+01	1.04E+01	2
KI=1227.81	FE=237	3.63E+02	1.33E+01	9.41E+00	2.59E+00	2
KI=1233.91	FE=238	2.06E+02	4.96E-01	3.50E-01	1.70E-01	2
KI=1238.61	FE=239	2.57E+02	3.54E-01	2.50E-01	9.76E-02	2
KI=1241.71	FE=240	8.42E+02	8.62E+00	6.09E+00	7.24E-01	2
KI=1245.41	FE=241	1.69E+02	2.58E+00	1.83E+00	1.08E+00	2
KI=1248.51	FE=242	4.43E+02	6.41E+01	4.53E+01	1.02E+01	2
KI=1252.81	FE=243	2.54E+02	6.87E+00	4.86E+00	1.91E+00	2
KI=1254.81	FE=244	3.71E+02	9.13E+00	6.45E+00	1.74E+00	2
KI=1259.31	FE=245	2.40E+02	4.44E+01	3.14E+01	1.31E+01	2
KI=1264.01	FE=246	2.29E+02	6.15E+00	4.35E+00	1.90E+00	2
KI=1267.61	FE=247	2.32E+02	1.42E+01	1.00E+01	4.32E+00	2
KI=1270.21	FE=248	2.36E+02	8.70E+00	6.15E+00	2.60E+00	2
KI=1273.11	FE=249	1.38E+02	4.61E+00	3.26E+00	2.36E+00	2
KI=1276.11	FE=250	2.10E+02				1
KI=1277.51	FE=251	2.13E+02				1
KI=1282.71	FE=253	2.01E+02	3.02E+01	2.14E+01	1.07E+01	2
KI=1285.61	FE=254	3.24E+02	8.65E+01	6.26E+01	1.93E+01	2
KI=1288.31	FE=255	1.26E+03	2.85E+02	2.02E+02	1.60E+01	2
KI=1294.21	FE=256	5.61E+02	1.00E+02	7.08E+01	1.26E+01	2
01300-n-C13-ANE	FE=257	1.12E+02	3.33E+00	2.35E+00	2.10E+00	2
KI=1304.41	FE=258	3.82E+02	3.84E+01	2.71E+01	7.10E+00	2
KI=1309.61	FE=259	3.88E+02	6.99E+01	4.94E+01	1.27E+01	2
KI=1311.51	FE=260	2.06E+02	1.58E+02	1.12E+02	5.44E+01	2
KI=1318.01	FE=262	2.13E+02	9.71E+01	6.86E+01	3.22E+01	2
KI=1323.11	FE=263	4.35E+02	1.24E+02	8.79E+01	2.02E+01	2
KI=1328.01	FE=264	2.74E+02	4.38E-01	3.10E-01	1.13E-01	2
KI=1333.41	FE=265	4.98E+02	7.55E+00	5.34E+00	1.07E+00	2
KI=1338.41	FE=266	2.61E+02	1.52E+01	1.07E+01	4.11E+00	2
KI=1342.21	FE=267	2.46E+02	3.93E+01	2.78E+01	1.13E+01	2
KI=1344.51	FE=268	9.10E+01				1
KI=1347.51	FE=269	2.81E+02	3.67E+02	2.60E+02	9.25E+01	2
KI=1351.11	FE=270	3.88E+02	5.08E+01	3.59E+01	9.26E+00	2
KI=1354.01	FE=271	3.28E+02	4.52E+01	3.19E+01	9.74E+00	2
KI=1358.91	FE=272	3.23E+02	2.98E+01	2.11E+01	6.51E+00	2
KI=1364.01	FE=273	1.59E+02	5.81E+00	4.11E+00	2.59E+00	2
KI=1370.31	FE=274	2.53E+02	2.13E+00	1.50E+00	5.94E-01	2
KI=1376.71	FE=275	4.89E+01	6.29E+00	4.44E+00	9.08E+00	2
KI=1383.01	FE=276	5.70E+02	6.13E+01	4.33E+01	7.60E+00	2
KI=1388.61	FE=277	1.82E+02	4.22E+00	2.98E+00	1.63E+00	2
KI=1393.41	FE=278	1.28E+02	1.96E+00	1.39E+00	1.08E+00	2
01400-n-C14-ANE	FE=279	1.08E+02	1.22E+00	8.60E-01	7.96E-01	2
KI=1404.01	FE=280	2.76E+02	2.82E+00	1.99E+00	7.22E-01	2
KI=1411.11	FE=282	2.26E+01	8.54E+00	6.04E+00	2.67E+01	2
KI=1413.61	FE=283	5.64E+02	9.75E+02	6.89E+02	1.22E+02	2
KI=1422.01	FE=285	5.22E+02	2.20E+01	1.56E+01	2.98E+00	2
KI=1427.21	FE=286	2.09E+02	8.91E+00	6.30E+00	3.01E+00	2
KI=1434.11	FE=288	8.83E+02	5.89E+01	4.17E+01	4.72E+00	2
KI=1443.21	FE=289	1.89E+02	8.61E+01	6.09E+01	3.23E+01	2

TABLE 46 (Concluded)

KI=1446.11	FE=290	3.50E+02	1.22E+02	8.64E+01	2.47E+01	2
KI=1450.51	FE=291	2.57E+02	2.15E+01	1.52E+01	5.92E+00	2
KI=1453.41	FE=292	6.25E+02	3.90E+01	2.76E+01	4.41E+00	2
KI=1456.71	FE=293	4.46E+02	1.99E+01	1.41E+01	3.15E+00	2
KI=1462.71	FE=294	1.49E+02	1.31E+01	9.29E+00	6.22E+00	2
KI=1470.71	FE=295	2.90E+02	1.15E+02	8.14E+01	2.81E+01	2
91500-n-C15-ANE	FE=296	2.71E+02	2.84E+00	2.01E+00	7.41E-01	2
91600-n-C16-ANE	FE=297	1.11E+03	1.20E+01	8.48E+00	7.61E-01	2
8ANTH-J10(1S)(KI=1772)		1.00E+01	0.00E+00	0.00E+00	0.00E+00	2
92118-(IMPURITY 83)		9.51E+01	5.13E+00	3.43E+00	3.81E+00	2
TOTAL CONCENTRATION		5.48E+04	8.71E+02	6.16E+02	1.12E+00	2

TABLE 47. STATISTICAL SURVEY OF KOVATS INDICES OF NAMED FEATURES  
IN DUPLICATE ANALYSES OF A PETROLEUM-DERIVED JP-4 FUEL

STATISTICAL SUMMARY OF NM11 DATA BASE

CONSISTING OF 2 SAMPLES  
RETENTION INDEX (KI)

COMPOUND NAME		AVERAGE	RANGE	STANDARD DEVIATION	REL STANDARD DEVIATION	NUMBER OF SAMPLES
CH2CL2 SOLVENT		526.89	0.00E+00	0.00E+00	0.00E+00	2
IMPURITY #1(KI= 538.6)		537.85	9.80E-01	6.93E-01	1.24E-01	2
IMPURITY #2(KI= 674.4)		674.49	3.55E-01	2.51E-01	3.72E-02	2
\$900-n-C8-ANE	FE=066	799.50	3.42E-02	2.42E-02	3.02E-03	2
KI= 828.11	FE=078	827.97	7.69E-03	5.44E-03	6.57E-04	2
KI= 842.71	FE=082	842.65	1.46E-03	1.04E-03	1.23E-04	2
KI= 865.01	FE=093	864.81	5.38E-02	3.81E-02	4.40E-03	2
KI= 871.21	FE=096	871.00	4.17E-02	2.95E-02	3.39E-03	2
KI= 880.01	FE=099	879.83	7.69E-03	5.44E-03	6.18E-04	2
KI= 881.61	FE=100	881.42	3.36E-02	2.37E-02	2.69E-03	2
KI= 884.51	FE=102	884.61	3.08E-02	2.18E-02	2.46E-03	2
KI= 892.61	FE=105	892.49				1
KI= 894.61	FE=106	894.59	1.16E-02	8.20E-03	9.17E-04	2
KI= 897.61	FE=108	897.64	1.86E-02	1.31E-02	1.46E-03	2
\$900-n-C9-ANE	FE=109	899.62	7.32E-04	5.18E-04	5.76E-05	2
KI= 901.31	FE=110	901.31	3.09E-02	2.18E-02	2.42E-03	2
KI= 913.91	FE=114	913.90	1.00E-02	7.08E-03	7.75E-04	2
KI= 917.71	FE=116	917.19	1.99E-02	1.41E-02	1.53E-03	2
KI= 920.11	FE=117	920.01	3.20E-02	2.26E-02	2.46E-03	2
KI= 922.61	FE=118	922.53	2.91E-02	2.05E-02	2.23E-03	2
KI= 924.71	FE=119	924.77	1.07E-02	7.60E-03	8.21E-04	2
KI= 929.11	FE=120	929.01	9.58E-02	6.78E-02	7.29E-03	2
KI= 933.51	FE=122	933.39	1.50E-02	1.06E-02	1.14E-03	2
KI= 939.41	FE=123	939.13	2.37E-02	1.67E-02	1.78E-03	2
KI= 941.01	FE=124	941.07				1
KI= 945.31	FE=125	945.27	3.17E-02	2.24E-02	2.37E-03	2
KI= 947.41	FE=126	947.45	7.32E-03	5.18E-03	5.47E-04	2
KI= 952.01	FE=127	952.01	2.14E-02	1.51E-02	1.59E-03	2
KI= 953.51	FE=128	953.58	4.88E-03	3.45E-03	3.62E-04	2
KI= 955.81	FE=129	955.76	2.19E-02	1.55E-02	1.62E-03	2
KI= 956.81	FE=130	958.19	6.40E-02	4.52E-02	4.72E-03	2
KI= 960.51	FE=131	960.57	2.94E-02	2.08E-02	2.17E-03	2
KI= 962.11	FE=132	962.04	3.42E-02	2.42E-02	2.51E-03	2
KI= 964.71	FE=133	964.77	2.76E-02	1.95E-02	2.02E-03	2
KI= 967.41	FE=135	966.82	3.08E-02	2.18E-02	2.25E-03	2
KI= 970.81	FE=136	970.94	0.00E+00	0.00E+00	0.00E+00	2
KI= 972.71	FE=137	972.77	1.71E-03	1.21E-03	1.24E-04	2
KI= 974.91	FE=138	974.80				1
KI= 976.91	FE=139	976.95	1.83E-03	1.30E-03	1.33E-04	2
KI= 979.21	FE=140	979.30	2.29E-02	1.62E-02	1.66E-03	2
KI= 980.21	FE=141	980.20				1
KI= 981.71	FE=142	981.70	3.54E-03	2.50E-03	2.58E-04	2
KI= 983.31	FE=143	983.34	2.04E-02	1.44E-02	1.47E-03	2
KI= 986.21	FE=144	986.15	1.04E-02	7.34E-03	7.44E-04	2
KI= 989.01	FE=145	988.81	3.30E-03	2.33E-03	2.36E-04	2
KI= 993.51	FE=146	993.63	1.10E-02	7.77E-03	7.82E-04	2
KI= 995.31	FE=147	995.26	3.65E-02	2.58E-02	2.59E-03	2
KI= 996.81	FE=148	996.67	1.15E-02	8.11E-03	8.14E-04	2
\$1000-n-C10-ANE	FE=149	1000.02	5.74E-03	4.06E-03	4.06E-04	2
KI=1003.91	FE=150	1004.10	2.67E-02	1.89E-02	1.88E-03	2
KI=1009.01	FE=151	1008.98	2.28E+00	1.61E+00	1.60E-01	2
KI=1013.91	FE=152	1014.37	5.20E-02	3.68E-02	3.62E-03	2
KI=1017.01	FE=153	1017.10	0.00E+00	0.00E+00	0.00E+00	2

TABLE 47 (continued)

KI=1020.11	FE=155	1020.29	5.13E-03	3.63E-03	3.55E-04	2
KI=1022.91	FE=156	1023.05	3.02E-02	2.13E-02	2.08E-03	2
KI=1025.81	FE=157	1025.83	3.86E-02	2.73E-02	2.66E-03	2
KI=1028.41	FE=158	1028.63	5.62E-03	3.97E-03	3.86E-04	2
KI=1031.61	FE=159	1031.65	3.69E-02	2.61E-02	2.53E-03	2
KI=1034.61	FE=161	1034.77	4.05E-02	2.87E-02	2.77E-03	2
KI=1036.61	FE=162	1036.51	7.32E-04	5.46E-04	5.27E-05	2
KI=1038.51	FE=163	1038.67	3.93E-02	2.78E-02	2.68E-03	2
KI=1040.61	FE=164	1040.62	4.22E-02	2.99E-02	2.87E-03	2
KI=1043.21	FE=165	1043.37	1.68E-02	1.19E-02	1.14E-03	2
KI=1044.71	FE=166	1044.80	1.32E-02	9.32E-03	8.92E-04	2
KI=1046.41	FE=167	1046.53	3.17E-03	2.25E-03	2.15E-04	2
KI=1049.41	FE=168	1049.63	1.51E-02	1.07E-02	1.02E-03	2
KI=1050.61	FE=169	1050.88	5.54E-02	3.92E-02	3.73E-03	2
KI=1053.81	FE=170	1053.90	4.39E-03	3.11E-03	2.95E-04	2
KI=1055.31	FE=171	1055.22	8.86E-02	6.27E-02	5.94E-03	2
KI=1057.91	FE=173	1058.16	2.37E-02	1.67E-02	1.58E-03	2
KI=1060.81	FE=174	1061.08	1.37E-02	9.67E-03	9.11E-04	2
KI=1064.51	FE=175	1064.85	5.08E-02	3.59E-02	3.37E-03	2
KI=1066.21	FE=176	1066.42	3.74E-02	2.64E-02	2.48E-03	2
KI=1070.61	FE=177	1070.86	8.79E-03	6.21E-03	5.80E-04	2
KI=1072.81	FE=178	1072.84	5.76E-02	4.07E-02	3.80E-03	2
KI=1079.01	FE=179	1079.14	4.08E-02	2.88E-02	2.67E-03	2
KI=1081.61	FE=180	1081.54	8.30E-02	5.87E-02	5.43E-03	2
KI=1084.31	FE=181	1084.40	6.01E-02	4.25E-02	3.92E-03	2
KI=1087.21	FE=182	1087.25	8.06E-03	5.70E-03	5.24E-04	2
KI=1089.41	FE=183	1089.62	1.08E-01	7.63E-02	7.00E-03	2
KI=1090.81	FE=184	1091.03	8.54E-03	6.04E-03	5.54E-04	2
KI=1093.81	FE=185	1093.94	5.35E-02	3.78E-02	3.46E-03	2
KI=1096.01	FE=186	1096.11	6.76E-02	4.78E-02	4.36E-03	2
KI=1100-n-C11-ANE	FE=187	1100.38	3.22E-02	2.28E-02	2.07E-03	2
KI=1101.71	FE=188	1101.81	8.45E-02	5.97E-02	5.42E-03	2
KI=1104.41	FE=189	1104.74	1.44E-02	1.02E-02	9.22E-04	2
KI=1108.41	FE=191	1108.47	1.76E-02	1.24E-02	1.12E-03	2
KI=1110.31	FE=192	1110.26	6.74E-02	4.76E-02	4.29E-03	2
KI=1112.61	FE=193	1112.65	6.13E-02	4.33E-02	3.89E-03	2
KI=1115.81	FE=194	1114.49				1
KI=1117.71	FE=195	1117.91	1.95E-03	1.38E-03	1.24E-04	2
KI=1119.71	FE=196	1119.99	9.03E-02	6.39E-02	5.70E-03	2
KI=1123.41	FE=198	1123.78	6.47E-02	4.57E-02	4.07E-03	2
KI=1127.01	FE=199	1127.32	5.86E-02	4.14E-02	3.68E-03	2
KI=1129.41	FE=200	1130.16	6.05E-02	4.28E-02	3.79E-03	2
KI=1133.71	FE=202	1133.52	9.62E-01	6.80E-01	6.00E-02	2
KI=1135.01	FE=203	1135.23	7.93E-02	5.61E-02	4.94E-03	2
KI=1137.11	FE=204	1137.19	3.52E-02	2.49E-02	2.19E-03	2
KI=1141.01	FE=206	1141.08	4.96E-02	3.50E-02	3.07E-03	2
KI=1144.01	FE=207	1144.24	2.91E-02	2.05E-02	1.80E-03	2
KI=1148.31	FE=208	1148.59	4.71E-02	3.33E-02	2.90E-03	2
KI=1149.81	FE=209	1149.94	4.22E-02	2.99E-02	2.60E-03	2
KI=1152.61	FE=210	1152.32	6.84E-02	4.83E-02	4.19E-03	2
KI=1155.01	FE=211	1155.15	4.49E-02	3.18E-02	2.75E-03	2
KI=1156.11	FE=212	1156.37	8.59E-02	6.08E-02	5.25E-03	2
KI=1158.01	FE=213	1158.23	8.30E-02	5.87E-02	5.07E-03	2
KI=1159.81	FE=214	1160.11	5.71E-02	4.04E-02	3.48E-03	2
KI=1161.81	FE=215	1161.92	3.81E-02	2.35E-02	2.02E-03	2
KI=1164.21	FE=216	1164.47	3.81E-02	2.69E-02	2.31E-03	2
KI=1170.41	FE=217	1170.63	1.25E-01	8.82E-02	7.54E-03	2
KI=1175.91	FE=219	1175.37	1.07E-01	7.60E-02	6.46E-03	2
KI=1179.71	FE=220	1180.16	3.44E-02	2.43E-02	2.06E-03	2
KI=1181.41	FE=221	1181.60	2.93E-02	2.07E-02	1.75E-03	2
KI=1185.31	FE=222	1185.35	3.91E-03	2.76E-03	2.33E-04	2

TABLE 47 (continued)

KI=1189.61	FE=223	1189.90	3.78E-02	2.48E-02	2.25E-03	2
KI=1191.51	FE=224	1191.57	2.69E-03	1.91E-03	1.60E-04	2
KI=1193.91	FE=225	1194.16	2.49E-02	1.76E-02	1.47E-03	2
KI=1195.41	FE=226	1195.80	3.30E-01	2.33E-01	1.95E-02	2
§1200-n-C12-ANE	FE=227	1200.41	5.15E-02	3.64E-02	3.03E-03	2
KI=1203.41	FE=228	1203.55	7.15E-02	5.06E-02	4.20E-03	2
KI=1205.61	FE=229	1205.89	9.28E-03	6.56E-03	5.44E-04	2
KI=1207.21	FE=230	1208.45				1
KI=1210.91	FE=231	1210.82	6.52E-02	4.61E-02	3.81E-03	2
KI=1214.21	FE=232	1214.47	4.10E-02	2.90E-02	2.39E-03	2
KI=1218.21	FE=233	1218.62	9.01E-02	6.37E-02	5.23E-03	2
KI=1221.71	FE=235	1222.08	8.03E-02	5.68E-02	4.65E-03	2
KI=1224.31	FE=236	1224.72	1.22E-03	8.80E-04	7.19E-05	2
KI=1227.81	FE=237	1227.04	6.59E-03	4.66E-03	3.80E-04	2
KI=1233.91	FE=238	1233.99	6.42E-02	4.54E-02	3.68E-03	2
KI=1238.61	FE=239	1238.84	5.57E-02	3.94E-02	3.18E-03	2
KI=1241.71	FE=240	1241.77	5.54E-02	3.92E-02	3.16E-03	2
KI=1245.41	FE=241	1245.25	7.81E-02	5.52E-02	4.44E-03	2
KI=1248.51	FE=242	1248.46	6.37E-02	4.51E-02	3.61E-03	2
KI=1252.81	FE=243	1253.12	5.86E-02	4.14E-02	3.31E-03	2
KI=1254.81	FE=244	1255.06	3.10E-02	2.19E-02	1.75E-03	2
KI=1259.31	FE=245	1259.48	7.13E-02	5.04E-02	4.00E-03	2
KI=1264.01	FE=246	1264.26	7.01E-02	4.95E-02	3.92E-03	2
KI=1267.61	FE=247	1268.66	1.57E-01	1.11E-01	8.75E-03	2
KI=1270.21	FE=248	1270.48	1.02E-01	7.22E-02	5.68E-03	2
KI=1273.11	FE=249	1273.14	3.66E-02	2.57E-02	2.03E-03	2
KI=1276.11	FE=250	1276.29				1
KI=1277.51	FE=251	1277.80				1
KI=1282.71	FE=253	1283.18	5.69E-02	4.02E-02	3.13E-03	2
KI=1285.61	FE=254	1285.95	3.42E-02	2.42E-02	1.88E-03	2
KI=1288.31	FE=255	1288.30	1.81E-01	1.28E-01	9.92E-03	2
KI=1294.21	FE=256	1294.54	3.81E-02	2.69E-02	2.08E-03	2
§1300-n-C13-ANE	FE=257	1300.25	6.84E-02	4.83E-02	3.72E-03	2
KI=1304.41	FE=258	1304.41	1.21E-01	8.55E-02	6.55E-03	2
KI=1309.61	FE=259	1309.93	4.76E-02	3.37E-02	2.57E-03	2
KI=1311.51	FE=260	1312.00	6.15E-02	4.35E-02	3.32E-03	2
KI=1318.01	FE=262	1318.21	8.40E-02	5.94E-02	4.51E-03	2
KI=1323.11	FE=263	1323.07	4.98E-02	3.52E-02	2.64E-03	2
KI=1328.01	FE=264	1327.93	1.17E-01	8.29E-02	6.24E-03	2
KI=1333.41	FE=265	1334.03	7.86E-02	5.56E-02	4.17E-03	2
KI=1338.41	FE=266	1339.74	2.56E-02	1.81E-02	1.35E-03	2
KI=1342.21	FE=267	1342.31	1.43E-01	1.01E-01	7.52E-03	2
KI=1344.51	FE=268	1345.76				1
KI=1347.51	FE=269	1347.45	1.59E-01	1.12E-01	8.30E-03	2
KI=1351.11	FE=270	1351.42	8.11E-02	5.73E-02	4.24E-03	2
KI=1354.01	FE=271	1354.29	6.10E-02	4.32E-02	3.19E-03	2
KI=1358.91	FE=272	1359.04	2.39E-02	1.69E-02	1.24E-03	2
KI=1364.01	FE=273	1364.20	5.30E-02	3.75E-02	2.75E-03	2
KI=1370.31	FE=274	1370.58	3.39E-02	2.40E-02	1.75E-03	2
KI=1376.71	FE=275	1376.87	3.86E-02	2.73E-02	1.98E-03	2
KI=1383.01	FE=276	1383.88	7.13E-02	5.04E-02	3.64E-03	2
KI=1388.61	FE=277	1388.70	8.28E-02	5.85E-02	4.21E-03	2
KI=1393.41	FE=278	1393.91	1.29E-01	9.10E-02	6.53E-03	2
§1400-n-C14-ANE	FE=279	1400.18	6.10E-02	4.32E-02	3.08E-03	2
KI=1404.01	FE=280	1404.26	1.01E-01	7.11E-02	5.06E-03	2
KI=1411.11	FE=282	1411.41	2.37E-02	1.67E-02	1.19E-03	2
KI=1413.61	FE=283	1414.64	2.84E+00	2.01E+00	1.42E-01	2
KI=1422.01	FE=285	1422.40	2.76E-02	1.95E-02	1.37E-03	2
KI=1427.21	FE=286	1427.19	3.78E-02	2.68E-02	1.87E-03	2
KI=1434.11	FE=288	1434.10	6.47E-02	4.57E-02	3.19E-03	2
KI=1443.21	FE=289	1443.61	2.56E-02	1.81E-02	1.26E-03	2



TABLE 47 (Concluded)

KI=1446.11	FE=290	1446.48	1.43E-01	1.01E-01	6.98E-03	2
KI=1450.51	FE=291	1450.58	6.93E-02	4.90E-02	3.38E-03	2
KI=1453.41	FE=292	1453.64	1.04E-01	7.34E-02	5.05E-03	2
KI=1453.71	FE=293	1459.02	7.57E-02	5.35E-02	3.67E-03	2
KI=1462.71	FE=294	1464.08	1.18E-01	8.34E-02	5.70E-03	2
KI=1470.71	FE=295	1470.94	8.94E-02	6.32E-02	4.30E-03	2
81500-n-C15-ANE:FE=296		1500.37	7.08E-02	5.01E-02	2.34E-03	2
81600-n-C16-ANE:FE=297		1600.26	8.23E-02	5.82E-02	3.64E-03	2
8ANTH-d10(1S)(KI=1772)		1771.70	2.04E-01	1.44E-01	8.14E-03	2
82118-(IMPURITY #3)		2118.00	0.00E+00	0.00E+00	0.00E+00	2
TOTAL CONCENTRATION		5000.00	0.00E+00	0.00E+00	0.00E+00	2

TABLE 48. STATISTICAL SUMMARY OF FEATURES IN 10 REFERENCE FUEL SAMPLES ANALYZED BY GC/MS

ID #	Feature Name	GC/FID Average, mg/mL	Percent Relative to Reference Fuel			
			GC/MS Average	GC/MS Range	GC/MS Standard Deviation	% Rel. Standard Deviation
1	KI= 566.2;	9.31	102	16.2	5.42	5.30
2	KI= 577.5;	6.47	102	20.7	7.14	6.97
3	\$600-n-C <sub>8</sub> -ANE;	15.9	98.8	17.7	5.84	5.91
4	KI= 626.9;	8.43	99.0	22.3	6.82	6.88
5	KI= 657.8;	7.99	101	16.5	5.95	5.89
6	KI= 661.1;	3.64	94.8	24.1	8.25	7.81
7	KI= 671.3;	4.67	93.7	18.1	6.31	6.73
8	KI= 673.1;	11.4	95.1	26.2	9.78	10.3
9	KI= 679.6;	13.8	93.5	19.8	7.02	7.51
10	KI= 681.0;	2.46	103	24.2	7.35	7.15
11	KI= 682.8;	2.35	99.4	29.5	8.61	8.66
12	KI= 685.2;	4.27	98.5	27.2	8.85	8.98
13	\$700-n-C <sub>7</sub> -ANE;	25.1	95.7	20.1	6.86	7.17
14	KI= 710.9;	15.9	98.0	16.9	6.75	6.89
15	KI= 714.4;	1.44	97.2	28.6	9.92	10.2
16	KI= 724.4;	1.62	99.8	28.3	9.09	9.11
17	KI= 730.9;	6.46	93.5	23.3	7.04	7.53
18	KI= 732.6;	1.61	100	20.0	6.23	6.22
19	KI= 734.1;	1.46	96.3	31.6	9.44	9.60
20	KI= 739.8;	1.55	101	31.4	8.90	8.77
21	KI= 756.7;	4.28	96.3	20.9	6.53	6.78
22	KI= 757.2;	8.51	100	30.1	9.39	9.38
23	KI= 765.6;	24.9	93.8	18.6	6.10	6.50
24	KI= 766.7;	4.66	103	32.2	10.8	10.5
25	KI= 768.6;	2.51	106	22.4	6.21	5.85
26	KI= 772.1;	20.3	94.8	19.1	6.84	7.22
27	KI= 784.0;	2.55	100	15.6	5.40	5.40
28	KI= 792.8;	-	100	27.6	8.47	8.47
29	\$800-n-C <sub>8</sub> -ANE;	27.0	97.4	21.4	7.01	7.19
	F=012( 43, 71)					
	F=013( 57, 41)					
	F=014( 57, 41)					
	F=018( 56, 41)					
	F=022( 84, 41)					
	F=023( 78, 77)					
	F=024( 56, 41)					
	F=025( 43, 85)					
	F=026( 43, 70)					
	F=027( 70, 41)					
	F=028( 70, 55)					
	F=029( 70, 56)					
	F=031( 43, 100)					
	F=036( 83, 98)					
	F=037( 55, 97)					
	F=039( 69, 41)					
	F=040+041( 57, 43)					
	F=042( 70, 55)					
	F=043( 43, 71)					
	F=044( 70, 55)					
	F=049( 70, 43)					
	F=050( 91, 92)					
	F=052+053( 57, 99)					
	F=054( 97, 112)					
	F=055( 97, 55)					
	F=056( 43, 57)					
	F=062( 97, 55)					
	( 97, 55)					
	F=066( 43, 85)					

TABLE 48 (continued)

ID #	Feature Name	GC/FID Average, mg/mL	Percent Relative to Reference Fuel			
			GC/MS Average	GC/MS Range	GC/MS Standard Deviation	% Rel. Standard Deviation
30	KI= 820.8;	2.20	96.4	24.8	9.54	9.90
31	KI= 824.7;	3.61	92.9	20.0	7.70	8.29
32	KI= 827.5;	5.59	95.4	16.2	5.38	5.64
33	KI= 833.4;	6.32	93.8	16.2	5.52	5.88
34	KI= 839.6;	2.08	100	25.8	7.28	7.24
35	KI= 851.3;	4.62	103	26.3	7.72	7.47
36	KI= 853.5;	1.77	91.9	18.2	7.36	8.01
37	KI= 859.5;	8.30	99.7	26.3	9.16	9.19
38	KI= 863.2;	12.0	96.7	30.8	10.8	11.1
39	KI= 864.3;	7.25	92.6	23.1	7.10	7.67
40	KI= 870.5;	2.89	101	27.0	8.33	8.21
41	KI= 877.1;	3.60	98.3	17.7	6.59	6.71
42	KI= 881.5;	16.3	92.6	16.8	6.31	6.81
43	9900-n-C <sub>9</sub> -ANE;	-	94.7	24.6	8.35	8.82
44	KI= 916.7;	-	101	27.5	7.88	7.79
45	KI= 919.7;	-	98.5	15.8	5.20	5.28
46	KI= 932.9;	3.79	94.2	18.4	6.72	7.14
47	KI= 938.3;	2.58	96.3	22.6	6.88	7.14
48	KI= 953.1;	5.65	97.5	26.8	7.85	8.05
49	KI= 959.4;	-	96.1	22.0	8.25	8.58
50	KI= 961.5;	4.65	94.3	14.1	4.88	5.18
51	KI= 964.3;	2.57	98.2	25.3	6.13	6.25
52	KI= 969.4;	-	94.9	19.0	6.40	6.74
53	KI= 970.3;	-	95.8	24.5	7.95	8.31
54	KI= 983.1;	7.16	92.1	21.8	7.13	7.74
55	\$1000-n-C <sub>10</sub> -ANE; F=149( 57, 43)	13.0	96.0	14.5	5.47	5.69
56	KI=1009.8;	3.61	96.7	30.4	10.5	10.8
57	KI=1022.4;	5.07	94.9	32.3	9.07	9.56
58	KI=1037.3;	-				

TABLE 48 (Concluded)

ID #	Feature Name	GC/FID Average, mg/mL	Percent Relative to Reference Fuel			
			GC/MS Average	GC/MS Range	GC/MS Standard Deviation	% Rel. Standard Deviation
59	KI=1037.3; ( 67, 41)	-	96.4	23.4	8.39	8.70
60	KI=1043.4; F=167(105, 77)	2.10	98.3	22.9	7.02	7.14
61	KI=1051.0; F=170(119, 134)	1.75	96.2	28.4	7.69	7.99
62	KI=1056.1; (105, 134)	-	100	18.8	4.85	4.86
63	KI=1057.6; ( 57, 43)	-	93.7	12.7	4.42	4.72
64	KI=1060.5; F=174( 71, 57)	2.15	101	26.9	8.41	8.32
65	KI=1064.1; F=175( 57, 71)	2.49	97.9	19.1	6.92	7.07
66	KI=1067.8; F=178(119, 134)	1.82	94.8	23.7	8.28	8.73
67	KI=1069.5; F=177( 57, 71)	3.25	97.5	32.0	11.3	11.6
68	KI=1075.6; F=179(119, 134)	3.11	97.4	15.1	4.76	4.88
69	KI=1093.2; F=186( 81, 67)	0.924	99.2	25.4	7.36	7.42
70	\$1100-n-C <sub>11</sub> -ANE; F=187( 57, 71)	15.5	93.6	24.6	6.88	7.35
71	KI=1107.8; (119, 134)	-	99.4	27.5	7.84	7.88
72	KI=1108.8; ( 81, 67)	-	99.6	23.0	7.42	7.45
73	KI=1124.6; ( 83, 82)	-	100	17.2	6.73	6.71
74	KI=1226.2; ( 57, 71)	-	101	33.2	9.93	9.81
75	KI=1162.4; F=216( 57, 43)	2.74	96.2	23.4	8.66	9.00
76	KI=1163.7; F=217(128, 81)	2.66	96.9	28.1	7.24	7.47
77	KI=1169.7; ( 57, 41)	-	94.9	30.1	11.8	12.5
78	\$1200-n-C <sub>12</sub> -ANE; F=227( 57, 43)	12.7	94.2	24.4	8.32	8.83
79	KI=1213.8; F=232( 57, 71)	3.93	94.3	20.6	7.04	7.46
80	KI=1263.6; ( 57, 43)	-	100	28.0	10.6	10.6
81	KI=1272.7; ( 57, 113)	-	94.1	25.4	9.19	9.77
82	KI=1274.9; (141, 142)	-	97.7	23.0	7.46	7.63
83	\$1300-n-C <sub>13</sub> -ANE; F=257( 57, 71)	10.8	93.8	24.4	8.56	9.12
84	KI=1376.3; F=275( 57, 71)	1.79	98.2	23.7	7.30	7.44
85	\$1400-n-C <sub>14</sub> -ANE; F=279( 57, 43)	5.23	95.7	27.5	9.35	9.77
86	\$1500-n-C <sub>15</sub> -ANE; F=296( 57, 43)	1.49	95.8	15.8	5.56	5.80

TABLE 49. GC/MS ID NUMBERS FROM EACH FUEL ANALYSIS FOR WHICH POOR CORRELATIONS WERE OBSERVED FROM GC/MS AND GC/FID ANALYSES

Fuel Number	GC/MS ID Numbers
585	4, 12, 31, 32, 38/39, 66, 68
585 (duplicate)	2, 38/39, 69, 79
588	3, 30, 32, 36, 38/39, 51, 60, 61, 65, 66, 68, 76
589	30, 38/39, 48, 68, 76
590	2, 3, 7, 25, 30, 31, 32, 38/39, 40, 46, 50, 51, 76
591	30, 31, 35, 50, 76
592	18, 30, 32, 35, 48, 50, 57, 67, 69, 76
593	3, 21, 22, 30, 32, 51, 66, 68
594	30, 35, 37, 38/39, 50, 66, 69, 76
595	7, 12, 16, 30, 35, 48, 50, 66, 68, 76
596	16, 30, 32, 31, 34, 36, 48, 51, 57, 64, 66, 76
597	12, 16, 30, 31, 35, 57, 65, 69, 76, 83
598	4, 12, 30, 46, 50, 76
599	10, 30, 35, 38/39, 43, 57, 64, 76
600	11, 12, 16, 30, 31, 34, 35, 37, 42, 47, 50, 57, 76, 78
601	25, 30, 31, 32, 36, 38/39, 41, 57, 61, 66, 69, 76
602	2, 3, 18, 30, 31, 32, 35, 38/39, 47, 50, 57, 76
603	3, 12, 30, 38/39, 57, 66, 69, 76
603 (duplicate)	6, 30, 38/39, 41, 47, 56, 60, 64, 69, 76
604	11, 22, 30, 35, 37, 56, 65, 76
605	27, 30, 31, 35, 36, 38/39, 40, 65, 69, 57
606	46, 56, 60, 61, 64, 66, 76, 79
607	
608	8, 30, 32, 35, 38/39, 66, 76
608 (duplicate)	30, 31, 35, 38/39, 76
609	8, 10, 11, 24, 30, 31, 38/39, 69, 76
609 (duplicate)	14, 30, 31, 38/39, 76
610	10, 12, 25, 27, 30, 31, 38/39, 69, 76
610 (duplicate)	30, 36, 38/39, 69, 47
611	3, 8, 10, 13, 22, 30, 41, 46, 57, 69, 76
611 (duplicate)	30, 35, 38/39, 41, 42
612	10, 12, 13, 30, 31, 35, 38/39, 40, 43, 50, 69, 84
613	12, 30, 31, 38/39, 47, 57, 69
614	31, 35, 64, 66, 67, 76
615	32, 36, 38/39, 50, 69, 76, 86
616	1, 30, 31, 35, 76
617	15, 18, 23, 24, 27, 30, 37, 38/39, 50, 64, 67, 69
618	30, 31, 35, 38/39, 76
619	25, 30, 34, 38/39, 41, 55, 57, 61, 64, 69, 76
620	12, 35, 38/39, 48, 50, 57
621	30, 46, 56, 60, 66, 69, 76, 38/39
622	30, 50, 69, 76
622 (duplicate)	38/39, 64, 68, 69, 76
623	30, 36, 48, 61, 76

TABLE 49 (Concluded)

Fuel Number	GC/MS ID Numbers
624	30, 31, 60, 67, 84
624 (duplicate)	30, 36/39, 60, 64, 76, 79
625	35, 38/39, 85, 86
626	30, 47, 57, 60, 69, 76
626 (duplicate)	4, 30, 38/39, 46, 50, 57, 76
627	30, 31, 35, 38/39, 50, 76
628	30, 38/39, 48, 55, 57, 64, 67, 69, 76
629	1-6, 10, 11, 12, 14, 16, 18, 20, 29, 31, 33, 35, 36, 37, 38, 40, 41, 42, 46, 47, 48, 56, 70, 78, 84, 85,
630	30, 31, 38/39, 48, 69
630 (duplicate)	30, 31, 38/39
631	30, 32, 38/39, 48, 51, 69, 76
632	30, 48, 67
633	3, 38/39, 76
634	30, 41, 48, 60, 76
635	30, 35, 48, 76
636	25, 30, 31, 34, 41, 68, 69, 75
637	30, 32, 33
638	38/39, 50, 76, 51
639	2, 12, 30, 35, 48, 50, 55, 67
640	12, 30, 31, 38/39, 41, 43, 48, 50, 60, 61, 68, 76
643	17, 18, 30, 31, 38/39, 48, 50, 76
644	17, 30, 38/39, 47

## USER EVALUATION OF REPORT

REFERENCE: Variability of Major Organic Components in Aircraft Fuel  
Volume II: Illustrations (Volume II of III)

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2. Specifically, is the report being used? (Information source, design data or procedure, management procedure, source of ideas, etc.)

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3. Can the information in this report lead to quantitative savings in man-hours/contract dollars saved, operating costs avoided, efficiencies achieved, or achievement of environmental objective? If so, please explain.

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4. What is your evaluation of this report in the following areas?

- a. Is the presentation easy to follow? \_\_\_\_\_
- b. Is the report complete? \_\_\_\_\_
- c. Is the report easy to read and understand? \_\_\_\_\_
- d. Is the research contained herein easy to implement? \_\_\_\_\_
- e. Is the listed reference material adequate? \_\_\_\_\_
- f. Does the report relate to your area of interest? \_\_\_\_\_

g. Does the report meet your expectations? \_\_\_\_\_

h. Does the report raise unanswered questions? If so, please list.

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\_\_\_\_\_  
\_\_\_\_\_

i. General Comments (Indicate what you think should be changed to make this report and future reports of this type more responsive to your needs, more usable, improve readability, etc.)

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\_\_\_\_\_  
\_\_\_\_\_

5. If you would like to be contacted by the people who prepared this report to ask specific questions or discuss the topic, please fill in the following information.

Name: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Organization Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

6. Please mail the completed form to:

Air Force Engineering and Services Center  
AFESC/RDXX  
Tyndall AFB FL 32403